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THE UNIVERSITY OF ALBERTA

OCCUPATIONAL STRESS, HEALTH AND COPING STRATEGIES IN FEMALE MANAGERS

by

Gerald Long

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

~~OF DOC~~TOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

FALL, 1986

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The undersigned certify that they have read, and recommended to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled OCCUPATIONAL STRESS, HEALTH AND COPING STRATEGIES IN FEMALE MANAGERS submitted by H. Gerald Long in partial fulfilment of the requirements for the degree of DOCTOR OF PHILOSOPHY.

.....
Supervisor

.....

.....

.....

.....
External Examiner

Date September 17, 1986

To Lynn, Christopher, Mom and Pop

ABSTRACT

The present study was exploratory and comparative in nature, concerned primarily with occupational stress and the health and coping of female managers. Particular emphasis was placed upon female managers in the study. Subjects were 144 female and 126 male managers at the senior, middle and junior management levels drawn from both the public and private sectors. They were compared in terms of potential organizational, extraorganizational and individual pressures. Comparisons were made of their reported psychosomatic symptoms and mood/affective states as well as job satisfaction and work performance. They were compared in terms of their level of Type A behavior. In addition, comparisons were made in terms of their adaptive and maladaptive managerial coping scores and in terms of positive and detrimental measures used to relax. Finally, the profiles of female and of male managers "at risk" for stress related illness and behavioral outcomes were formulated. Among the most significant findings was that assessed cumulatively, female managers experience higher work and home pressure levels and a greater number of negative stress outcomes than male managers. Although at comparatively low levels, these additional pressures, almost without exception, result from sexual discrimination and prejudice from both organizational/corporate policies and from others at work, with home/work conflicts also being more salient for female managers. At the same time, the research provided evidence of many important similarities between women and male managers at each level of the management hierachy in terms of characteristics, work

performance and the "high" pressures and negative stress outcomes experienced. Specifically, no statistically significant differences were found between the female and male samples in terms of any of the mood/affective dimensions, job satisfaction, Type A behavior levels or in terms of frequency of use of adaptive and maladaptive managerial coping behaviors or in terms of measures used to relax. Overall, it was concluded that the experience of work is very different for women managers as they continue to face sex-based barriers and impairments to their career progress and development not experienced by their male counterparts. The need to address the additional occupational, home and career pressures confronting women managers at the individual, organizational and societal levels and strategies to foster equality of employment opportunities for women managers were reviewed. It was also concluded that in addressing these issues, the important differences, as well as similarities in needs of both women and men managers must be recognized.

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CHAPTER 1

Background and Objectives

Health and Occupational Stress: The Costs

In the past ten years, substantial progress has been made in documenting the role of psychosocial stressors in the etiology and development of physical and mental disease (Schwartz, 1979, 1983). It is now known, for example, that not only are the classic psychosomatic disorders such as hypertension, ulcers and asthmas, strongly influenced by psychosocial stress, but even the body's immune system can be impaired by stress in the environment, making an individual more susceptible to infectious diseases and viral illnesses (Selye, 1976). There has also been considerable progress in developing effective approaches to the management of psychological and physiological responses to stress (Schwartz, 1983). This progress notwithstanding, occupational stress continues to present a challenge to industry, government, labor and science.

The increased incidence and the economic and social costs associated with occupational stress and stress-related diseases underscore the need for research in this area. Although it is impossible to exactly pinpoint the economic costs of stress, even the estimates are alarming. As an example, in 1982 the annual cost of heart disease in terms of medical expenses and lost productivity was estimated to be $50.7 billion in the United States (Price, 1982). Based on estimates and projections from government, industry and health groups, Ivancevich and Matteson (1980) estimated the mental and physical health

costs of stress to be approximately $75-90 billion annually, which they acknowledge to be a conservative estimate. Cooper (1981) maintains that three times as many days are lost each year to stress-related illness as to industrial disputes. There are other costs associated with stress-related accidents, sabotage, absenteeism and turnover, often reflecting the stress of job dissatisfaction and contributing directly to industrial, physical and mental health costs.

These figures do not include the significant social costs associated with stress. The strained marital, family and interpersonal relationships; the increasing levels of dissatisfaction with work and careers are only a few examples. The cost figures cited earlier may in fact be insignificant in comparison to the impact of stress on the quality of life of workers.

Women in the Work Force

Radical changes in the role of women in society, economic pressures, the women's movement and psychological needs such as developing one's identity have all combined to encourage women to take a more active role outside the home in terms of pursuing full-time careers (Cooper & Davidson, 1982). In the United States and Canada, there have been sustained increases in the labor force participation rates of women in recent decades - from 32% in 1974 to 43% in 1970 to 51% in 1980 (Brown, 1981). Not only are more women working than ever before, but there has also been a significant, if not proportional, growth in the number of women entering traditionally male dominated occupations such as management. According to Brown (1981), in the period 1972 to 1979

the number of women in the "managers and administrators" category grew 75%, from 17.5% to 24.6% of all managers and administrators in the United States. These figures, combined with the unprecedented numbers of women who are preparing themselves for business careers through enrollment in undergraduate and graduate business degree programmes, suggest that progress is being made and that women will comprise an increasingly larger proportion of those occupying managerial positions (Brown, 1981).

There is evidence that these trends may have significant implications from an occupational health perspective. There is evidence in the limited available research indicating that not only do female managers face many of the same sources of job, career and organizational pressures as their male counterparts, but also they encounter an additional range of significant stressors, resulting in even higher levels of work-related stress for female managers (Davidson, Cooper & Chamberlain, 1980; Davidson & Cooper, 1983). Will women who take on full-time careers and traditional male jobs (often in addition to family/home responsibilities) join the growing number of men who suffer from job-related stress and illness, is a question that can be asked, but not answered on the basis of our present knowledge (Davidson & Cooper, 1983). It is possible that in the short run, at least, females may be at even greater risk for stress-related illness (Cooper, 1981).

It is known that female health patterns are changing. Wingerson (1981) has shown that death rates due to coronary heart disease and cancer have been increasing for women since the 1950's; results which

she has attributed to the increasing numbers of women entering the work force and their exposure to occupational stresses. Haynes and Feinleib (1980) have reported that married working women with children are at substantially greater risk for developing coronary heart disease than are housewives. Although the suicide rate for males is twice that of females, this relationship is reversed when only professional men and women are considered (Ivancevich & Matteson, 1980). As pointed out by Wingerson (1981), a very real difficulty in coming to grips with these questions is that very little effort has been made to include women, let alone employed or executive women, as a distinct group for study in health research.

In summary, providing the impetus for this research is the contention (Davidson & Cooper, 1983) that the increasing number of women entering management careers combined with evidence that they may be at high risk for stress-related illnesses and outcomes underscore the need for research directed to ascertaining the stresses and strains experienced by female managers and their affects on the physical and mental health and overall well-being of this occupational group. Only with that knowledge can the pressures and outcomes be adequately addressed. It is believed that through this type of research, the compounding of an already bleak occupational stress and illness picture may be prevented or diminished.

Research Objectives

The objectives of the proposed research are adapted from those suggested in similar work by Davidson and Cooper (1983), upon which this research intends to build. The primary objectives of the proposed research were as follows:

1. To identify the major pressures and stresses experienced by female managers, as reported by the managers themselves.

2. To identify the major pressures and stresses experienced by female managers as compared to male managers.

3. To identify and compare the major effects of these specific stresses relative to mental and physical health and behavioral outcomes between men and women managers.

4. To analyze the relationships between behavioral health measures and the demographic and stressor factors that act on female and male managers; i.e., developing high "risk" profiles.

5. To relate the findings to the educational and training needs of female managers and to review individual, organizational and possible legislative approaches that could beneficially assist in minimizing the pressures and possible barriers faced by women managers.

To accomplish the above research objectives, a sample of female and male managers employed at the senior, middle and junior management levels in the public and private secotrs was surveyed. All instruments utilized in the study were self-report measures, contained in a survey

questionnaire distributed to the subjects. This included measures of potential job, organizational, home and social pressures; psychosomatic symptoms; mood/affective states; job satisfaction, work performance; Type A behavior, adaptive and maladaptive coping behaviors; and in terms of positive and detrimental measures used to relax.

In line with the above research objectives, the principle statistical procedure utilized was Analysis of Variance, with a 2 x 3 (sex x management level) ANOVA being employed to test for significant sex and management level differences in terms of the noted variables. A 2 x 2 (sex x sector) ANOVA was also employed to test for sector differences on the same variables. The multivariate statistical technique of step-wise multiple regression analysis was employed independently on the female and male manager samples in order to identify and compare the predictors of each of the general health, total mood disturbance, job satisfaction and work performance. The objective of this analysis being to provide some indication of the characteristics of those female and male managers at "risk" for negative stress outcomes.

Practical Importance

For many reasons, including the significant costs of stress-related illnesses reviewed earlier, governments, industry and labor have begun to recognize the need to develop strategies to prevent illness and to improve individual health and well-being (Murphy, 1984). While progress has been made, significant gaps remain within our knowledge in these

areas, necessitating further research (Schwartz, 1983). The area of occupational stress and female managers is a good example, as in the past they have either not been included in the studies of management stress or have not been differentiated from their male peers. Although there is recent evidence (Cooper & Melhuish, 1984) that there may be significant differences between female and male managers with respect to occupational stress and outcomes, the research base is just too limited to draw definite conclusions.

The present research was intended to make a contribution to our knowledge with respect to managerial stress and health, particularly in relation to female managers. The study very specifically identified the sources and levels of stress experienced by male and female managers and at different levels of the management hierarchy. It also examined physical and mental health and behavioral outcomes as well as managerial coping strategies on a similar basis. In this respect, the study developed new knowledge as well as built upon and expanded research findings in this area.

Although the study is primarily descriptive and exploratory in nature, the research questions were framed and instruments chosen with the intention of developing knowledge which could be applied to primary prevention of distress and illness and to promotion of psychological health and well-being of female and male managers. A number of alternatives in this regard are discussed, paying particular attention to identified sex differences which need to be reflected in policy and

programme development. The present study was seen as developing the information base upon which policies and programmes could be developed and evaluated in later research.

Finally, it is important to point out that the success of any programme to minimize stress and maximize job satisfaction is dependent upon our ability to diagnose the job, personal and organizational stressors involved (Cooper & Melhuish, 1984). The present research utilized instruments enabling such "diagnoses." Through this evaluation and further refinement, some of those instruments may eventually prove to have direct application in "diagnosis" in industry.

CHAPTER 2

Stress: Theoretical and Research Perspectives

The major conventional conceptualizations of stress will be reviewed in this chapter. It is not the intention to exhaustively review each conceptualization, but rather to provide an overview of the stress field through examining the differing theoretical and research perspectives from which stress has been considered. The occupational stress concept will be considered through examination of representative models and the specific model of occupational stress which provides the framework for the proposed research will be introduced and discussed.

It is worth noting at the outset that while emphasis here will be placed on the negative aspects of stress, this should not be taken as a failure to recognize that stress can be a positive force. As Zeagan (1982) has noted, "it is important . . . to see stress as a factor that can trigger a multiplicity of organismic reactions, some of which may contribute to illness, while others may produce healthy adaptive response and personal growth" (p. 137). Selye (1974) made this same point, distinguishing between <u>eustress</u>, the pleasant stress of fulfillment, and <u>distress</u>, damaging stress with harmful consequences. In this sense, the emphasis in the review which follows will be placed on distress.

<u>Definitions and Models of Stress</u>

The word "stress" is perhaps one of the most imprecise in the scientific dictionary. Ivancevich and Matteson (1980) draw an

interesting analogy, indicating that "like sin, stress means an incredibly different array of things to different people; both are short, emotionally charged words used to refer to something that otherwise would take many words to say" (p. 5).

Although existing theoretical models for the study of stress and adaptation have a common interest in how environmental demands impact on health and behavior, each approach tends to follow disciplinary lines and therefore has a different focus in the delineation of environment-behavior relationships (Novaco, 1979). The fact that "stress" has been used to signify environmental agents which disturb structure and function, as well as responses to such agents in the different levels of psychological, physiological and social systems has been the source of considerable confusion (Cooper & Davidson, 1982). The perspective taken with respect to stress as an environmental agent, as a response to such agents, or of some combination of these, has provided the basis for the major conventional conceptualizations of stress. Each discipline tends to think about stress in different ways and studies different phenomena utilizing different methodologies and measures.

Stress from the perspective of the stimulus. Stress conceived as a stimulus is used to describe situations characterized as new, intense, rapidly changing, sudden or unexpected (Zeagan, 1982). Lazarus (1966) also included as stressful stimuli such events as failure or threat of failure, noxious or unpleasant agents in the environment, isolation, bereavement and rapid social change. Stress from this perspective is

conceptualized in terms of an environmental event or set of circumstances, presumed to elicit or require an unusual response from the individual. The key here is that stress is external to the individual.

The stimulus approach has been most prominently developed in the study of the relationship between the accumulation of life events and the subsequent risk of physical and mental illness. The life events research model emphasizes change and adaptation. It hypothesizes that it is possible to make predictions about susceptibility to a wide array of diseases through determining the magnitude of critical life changes taking place within a limited span of time (Zeagan, 1982). The tacit assumption being that "life change events, by evoking adaptive efforts by the human organism that are faulty in kind and duration, lower bodily resistance and enhance the probability of disease occurrence" (Holmes & Masuda, 1974, p. 68). It is also assumed that stress is inherent in the accommodation to the life events and that the accumulation of life events, whether positive or negative, increases the likelihood of illness (Coyne & Holroyd, 1982).

The researchers most closely associated with this perspective and the assessment of stress utilizing life events scales are Holmes and Rahe and their colleagues (Holmes, 1979; Holmes & Rahe, 1967; Rahe, 1978). They empirically developed the Social Readjustment Rating Scale (SRRS) containing 43 common human events (e.g., marriage, change in residence, fired from work), with each item weighted on the basis of the estimated amount of change or readjustment required on the part of the

individual (Holmes & Rahe, 1967). Items such as death of a spouse, divorce, marital separation, jail term and death of a close family member are thought to require the most adaptive change. As earlier noted, from this view, no distinction is made with respect to the valence of the event, both events that represent positive experiences (e.g., vacation) and those clearly negative (e.g., fired from a job) are seen to make adaptive demands on an individual and thus to produce stress (Perkins, 1982). On this basis, the estimated total life stress of the subject becomes the sum of the weights, or life change units (LCU) for the events reported.

Utilizing the SRRS, Holmes and Rahe (1967) were able to examine the temporal relationship between a cluster of life event changes and the onset and severity of illness. They discovered a significant relationship between major health changes and life crises, which they defined as an accumulation of at least 150 LCU's during a period of one year. Their initial work spawned a wide variety of other instruments and modifications of the SRRS in the 1970's. Based on the massive literature generated, there is little doubt that a significant relationship exists between the experience of stress as assessed by life events scales and a host of adverse physical and psychological conditions (Perkins, 1982). The question has been raised, however, as to whether in practical terms, life events scores are predictive of future illness. Rabkin and Streuning (1976), for example, have pointed to the very modest size of stress-disorder correlations identified in

the life events research (typically .30 or less, accounting for under 10% of variance).

In addition to practical significance and a host of methodological issues (see Perkins, 1982 for a review) the stress as stimulus or life events perspective has been most strongly criticized for ignoring individual differences. It has been argued that for a complete understanding of the impact of life events, factors such as the meaning of social changes to the individual, the individual's physical susceptibility, ability to cope with a variety of stress and the individual's social network must all be taken into consideration (Zeagan, 1982).

It would appear then that while life events research and the stress as stimulus perspective have drawn attention to an important source of stress, new investigation and theory must go beyond the linkage of stimulus and probability of illness to identify those individual and situational variables mediating the impact of life events on susceptibility to illness (Holroyd & Coyne, 1982; Perkins, 1982; Zeagan, 1982). While this need has not gone unrecognized, Rahe and Arthur (1978) have rightly pointed to the complex and difficult task involved in investigating and developing an all-encompassing model taking into consideration not only environmental variables, but also social, psychological and physiological characteristics of the individual.

Stress as a response. In the biological sciences, stress is frequently equated with physiological mobilization. From this perspective, stress is the way in which the organism handles perceived

stressors, the defences it mobilizes and the reactions ignited that are taken to constitute the true nature of stress (Zeagan, 1982).

The pioneering work of Dr. Hans Selye (1956, 1973, 1976) set the mold for response theories of stress. Although his focus was on animal research with stimuli that were physically noxious, his theory is often used as a model to illustrate the physiological mechanisms whereby stress can produce pathology (Cohen, 1979). In Selye's (1976) view, stress is "the nonspecific response of the body to any demand made upon it." These demands, which he labelled "stressors," can arise from both pleasant and unpleasant stimuli and situations. Of particular importance is the duration, frequency and intensity of the stressor.

According to Selye (1976), the same complete pattern of defensive physiological processes involving the hypothalmic-pituitary-adrenal axis occur in response to a wide range of stressors. Selye termed this defensive reaction the General Adaptation Syndrome (G.A.S.) and described it as occurring in three temporal stages. In the first, the alarm stage, the stressor is recognized by the organism and signals are sent throughout the body via hormones released from the endocrine glands. This results in what has often been termed the "fight or flight" response characterized by increases in respiration and heart rate, blood pressure, muscle tension and other functions involved in massive energy expenditures and by decreases in some bodily functions.

If the threat is extremely short lived, the G.A.S. may not proceed beyond this stage. If it does proceed, the second, or resistance stage is entered. In this stage, the body attempts to resist the stressor in the best possible way by enhancing the functioning of the organ system or process best able to deal with or suppress it. This may result in successful return to equilibrium or homeostasis, or, if the stress continues or the defence doesn't work, the exhaustion stage may be entered. During the exhaustion phase, the organ system or process that is dealing with the stress collapses. In the exhaustion stage, disease or malfunctioning of the organ system, or even death may occur.

Significant in Selye's work was the recognition that the body has finite amounts of adaptive energy. Activation of the G.A.S. places extraordinary demands upon the body and its limited adaptive energy. Ironically, while adaptation may be a life saving process, it must also be recognized as a disease process; hence, Selye's (1976) reference to "diseases of adaptation" (Girdano & Everly, 1979). The view is that the more frequently an individual is in the "fight or flight" mode the more susceptible that individual is to fatigue, disease, disability, aging, death and associated performance decrements (Ivancevich & Matteson, 1980).

Although Selye's work on the body's response to stressors enhanced our understanding of some of the biochemical, anatomic and neurohormonal changes that accompany adaptation to stress, his model has not gone without criticism (Zeagan, 1982). Selye did not explicitly include cognitive or emotional factors and their impact on the adaptive process.

Both Mason (1975) and Lazarus (1975) have presented empirical evidence indicating that the G.A.S. may be precipitated, not by noxious physical stimuli per se, but rather, by the psychological interpretation that the individual places on the stimuli. Also, Lazarus (1971) has argued that limiting the meaning of stress to Selye's G.A.S. could eliminate consideration of serious stress - induced adaptational problems at the level of behavioral maladjustment and the variety of stress-related psychological problems from which persons suffer which are not necessarily accompanied by tissue damage.

These criticisms notwithstanding, the conceptualization of stress as a response has had a wide ranging impact in the stress field in terms of research directions, measurement and treatment. Reflecting this perspective, plasma and/or urinary levels of ACTH, corticosteroids and catecholamines - all stress hormones - are commonly used as indicators of stress; electromyographic, electrodermal and cardiovascular measurement criteria are also frequently utilized as indicators of the stress response (Everly & Rosenfeld, 1981). From a treatment perspective, interventions such as pharmacological, biofeedback and neuromuscular relaxation techniques all reflect the stress as a response perspective and are directed to the psycho-physiological processes involved in the stress response.

Psychological stress. Psychological or interactional approaches to stress pay considerable attention to meditational processes and focus on the interaction between the person and the environment (Novaco, 1979). Emphasis has primarily been placed on individual cognitive, personal and

social psychological factors that attenuate or ameliorate stress effects. In emphasizing mediational processes, psychological approaches to stress (Appley & Trumbull, 1967; Lazarus, 1966) adopt the view that events or conditions that might be classified as stressors do not have uniform effects across individuals, with particular individuals being more or less vulnerable to exposure to environmental demands. A common theme of these approaches is the assumption that the perceived environmental demands and the individual's perception of threat must be determined in order to calibrate potential adverse effects (Novaco, 1979).

Lazarus and his colleagues (Lazarus, 1966; Coyne & Lazarus, 1980; Lazarus and Launier, 1978) have attempted to develop a broad integrative framework which they term a transactional model of stress. From this perspective it is argued that psychological stress is best conceived in terms of person-environment transactions that tax or exceed the resources of the person. Stress is conceived of, not as an environmental event, a response, or characteristic of the person, but rather as a relationship between perceived demands and perceived response capabilities and costs.

The transactional perspective emphasizes two mediational processes - cognitive appraisal and coping responses. Cameron and Meichenbaum (1982) describe this process:

> A stressful transaction begins with a primary cognitive appraisal that a situation requires an effective response to avoid or reduce physical or psychological harm and a secondary appraisal that no completely effective response is immediately available. The person

> makes the best response possible. The response (or its absence) has environmental repercussions, and the external situation tends to be altered. This prompts reappraisal of the situation and potential coping responses, with this reappraisal in turn affecting the ongoing response to the situation. (p. 565)

A key assumption of the transactional model is that the evaluative primary and secondary appraisal, as well as coping responses determine the person's stress reaction, emotions experienced and adaptational outcomes (Coyne & Holroyd, 1982). Persons are thus seen, not as "passive responders," but as actively defining and shaping stressful transactions by means of their cognitive appraisals and coping responses, which may be adaptive or maladaptive. Coping will be discussed more fully in Chapter 3.

As noted earlier, there has been some empirical evidence emphasizing the importance of the psychological stress perspective (Lazarus, 1975); Mason, 1975). There is evidence that human neuroendocrine stress responses in stressful situations, as well as the duration of activation, are influenced by the nature of the person-environment transaction (Frankenhaeuser, 1975, 1980). Coyne and Holroyd (1982) speculate that one way in which coping might affect health outcomes is by influencing the frequency, intensity and possibly the character of the physiological stress response.

The psychological perspective and, in particular, the transactional model of stress appears to provide a useful basis for phrasing questions about the role and mechanisms of psychosocial stressors in health and

illness. Although introducing greater complexity, the emphasis on person-environment transactions, the injection of cognitive mediation and recognition of individual differences does seem to have an advantage over perspectives viewing only the person or environment in isolation.

In summary, this brief review suggests that each of these conceptualizations has made important contributions to improving theory and research on the stress phenomena as well as in applications to treatment. While they have been discussed separately here, this distinction is becoming less clear in practice. As it has become evident that no single definition or model of stress is sufficient for fully understanding the stress phenomena, there has been a movement toward multi-disciplinary and multi-dimensional conceptualizations and research approaches to stress (Davidson & Cooper, 1981; Lazarus & Launier, 1978; Zeagan, 1982). This is a trend that is likely to continue. This has certainly been true in the field of occupational stress, which will now be examined.

Occupational Stress

Stress can be considered from another perspective; that is, a job or occupational perspective. None of the models discussed thus far give specific consideration to stressful factors in the work environment. That is the purview of the occupational stress field. Occupational stress is a relatively new concept and field of study. Holt (1982) defines the field of occupational stress in common sense terms, stating that the basic proposition of the field is that "some aspects of many kinds of work have bad effects on most people under certain circumstances" (p. 421). The field of occupational stress then

becomes the study of those aspects of work that either have or threaten to have bad effects (Holt, 1982). Primarily, the bad effects studied have been the physical and mental health status of workers.

The trend in occupational stress research has been to shift the focus from physical to psychosocial sources of stress. Caplan et al. (1975) point out that research on psychosocial stress and strain is much more complex than studies of physical stress. There are a larger number of variables involved which are generally less well defined and there is no generally accepted framework for viewing these problems. As a result, there is considerable disagreement in the literature as to the variables that should be studied, how they should be defined and the theoretical models for relating them. This is compounded in the case of females, who have been the subject of considerably less occupational stress research than their male counterparts.

A number of approaches have been taken with respect to defining occupational stress. One of the most common is to note the definitional confusion discussed earlier and to avoid providing a specific definition. As Holt (1982) notes, often within the occupational stress field, stress is not used as a technical term, but rather as a general term of negative evaluation for a state of upset or its precipitant. Holt (1982) points out that the prevalent research paradigm in occupational stress is stress (independent variable) → undesirable consequences (dependent variable) under certain parametric conditions (moderator variable), with the moderator variable not always being included. While there is this commonality in research paradigms, as

indicated above, diverse conceptualizations and models of job or occupational stress have been advanced. A number of models reflecting these differing perspectives on occupational stress will be briefly considered before turning to the model which provided the framework for the present study.

Caplan et al. (1975) defined stress as "any characteristic of the job environment which pose a threat to the individual. Two types of stress may threaten the person - either demands which he may not be able to meet or insufficient supplies to meet his needs" (p. 3). Underlying this definition and two types of job stress is the theory of person-environment fit developed by French, Rogers and Cobb (1975). One kind of fit is the extent to which a person's skills and abilities match the demands and requirements of his or her job. A second kind of fit is the extent to which the person's needs are supplied in the job environment. From this perspective, a job is stressful to the extent that there is a misfit of either of these relationships between employee and job environment. When a misfit of either kind threatens an individual's well-being, various strains or deviations from normal responses in the person can occur. These can be psychological strains such as job dissatisfaction, anxiety and insomnia or restlessness; physiological strains such as high blood pressure or elevated serum cholesterol; and behavioral symptoms such as smoking and eating more and frequent medical consultation (Van Harrison, 1978). Theoretically, as the individual experiences these job-related strains over a period of time, their effects may culminate in various kinds of illness involving

physical and/or mental health. The model is not static, however, as the individual experiences strain and illness as a result of poor person-environment fit, the individual may attempt to improve the fit between himself or herself and the job through coping or defence (Van Harrison, 1978).

Job stress has been defined by Margolis and Kroes (1974) as a condition at work interacting with worker characteristics to disrupt psychological or physiological homeostasis. The causal conditions are job stressors and the disrupted homeostasis is job-related strain. Beehr and Newman (1978) describe the five dimensions of job-related strain suggested by Margolis and Kroes (1974) as short-term subjective states such as anxiety and tension, long-term and more chronic psychological responses, depression and alienation being examples, transient physiological changes such as levels of catecholamine and blood pressure, physical health, and finally, work performance decrement.

Focusing more specifically on managers, Ivancevich and Matteson (1980) have begun development of what they term an integrative model of stress and work, which attempts to incorporate features of medical, behavioral and behavioral medicine and other approaches to stress, while maintaining a managerial perspective. Ivancevich and Matteson (1980) define stress as "an adaptive response, mediated by individual characteristics and/or psychological processes, that is a consequence of any external action, situation or event that places special physical and/or psychological demands upon a person" (p. 9). Their definition is a form of response definition of stress; that is, it posits stress as

the response of the individual, with various stimulus conditions being potential stressors.

The Ivancevich and Matteson (1980) model is presented in Appendix A. The model incorporates antecedent intraorganizational stressors at the physical, individual, group and organizational levels. Importantly, extraorganizational stressors such as family life, which are often ignored in models of occupational stress, are included. In respect to perceived stress, extraorganizational life stress interacts with organizationally related job and career stress. The inclusion of perceived stress is important, as individual perceptions largely determine whether an antecedent stressor is stress provoking. These perceptions are influenced by the cognitive/affective and demographic/behavioral difference variables which may moderate other relationships within the model as well. The model also incorporates and distinguishes between physiological and behavioral outcomes. Finally, the diseases of adaptation are included as the consequences of stress.

While each model discussed has made useful contributions to the occupational stress field, the Ivancevich and Matteson (1980) model is more representative of current thinking in the field. That model and current thinking followed on the proposals of Cooper and Marshall (1976) that sources of work stress could only be adequately investigated by taking a multi-disciplinary approach. An approach that would investigate the whole area of problems - psychological, social and physiological - by which individuals in a work environment are taxed by stimulus demands made upon them. Davidson and Cooper (1981a) took on

the task of developing this multi-disciplinary and multi-dimensional model of occupational stress. That model provided the foundation for the Davidson and Cooper (1981b) model of occupational stress in female managers which maintains the same thrust. The Davidson and Cooper (1981b) model provided the framework upon which the present study was based.

While that model incorporates factors equally applicable to male and female managers, its particular significance lies in the fact that it approaches occupational stress from a perspective that emphasizes and highlights the influences of occupational stress and stress outcomes which research findings have isolated as being particularly relevant to females occupying managerial positions. For ease of reference, the Davidson and Cooper (1981b) model is presented in Appendix B. Their model is based on the contention that research into stress in female managers must examine the influences of both organizational and extraorganizational sources of stress on the individual. This approach acknowledges that stressors in the work environment can also affect an individual in her home and social environment and vice versa. Individual sources of stress are also incorporated into the model.

In this model, the potential stressors within the work environment are identified in the work arena, which in turn incorporates a number of subclassifications of stressor factors. These include Factors Intrinsic to the Job such as workload and ability to delegate; Roles incorporating role ambiguity and conflict; the "Token Woman" reflecting factors such as isolation and exclusion. Career Development; Organizational

Structure and Climate; and Relationships at Work are the remaining subclassifications.

The major extraorganizational categories of potential stressors are the Home and Social arena, incorporating factors such as home/career and dual career conflicts and the Individual arena, reflecting individual differences and determinants such as the "culture trap," stress coping ability and Type A behavior pattern. It is worth noting, although not made explicit by Davidson and Cooper (1981b), that while the variables within the three arenas are referred to as potential stressors or precursor variables, many may also moderate the stressor and stress outcome relationship. For example, while the lack of a supportive relationship at home may be a potential stressor, a supportive home relationship may moderate the impact of other stressors on the individual. Finally, the model incorporates a number of possible stress outcomes in the Manifestation arena. These include behavioral outcomes such as impaired job performance and drug abuse, physical illnesses such as migraine and hypertension, and mental illness.

According to Davidson and Cooper (1981b), their model is intended to be considered as an integrated whole. They indicate that taken together, the arenas form this integrated whole of forces which both impinge upon and interact with the individual. The stressors in one arena can affect the individual, which in turn may effect changes in the amount of stressors and relationships in other arenas, and so on. Also, when an individual is sufficiently stressed in one of these precursor

arenas, the stress will then materialize in one or more of the stress manifestation arenas. Davidson and Cooper (1981b) note that the specific manifestation is dependent upon many factors and is an "individual within context" situation. That is, when exposed to the same apparent stressors, one individual may develop hypertension while another may abuse alcohol.

In summary, on the basis of review of several models of occupational stress, the Davidson and Cooper (1981b) model of occupational stress in female managers was adopted as the framework of the present research on the basis of its relevance and comprehensiveness. Rather than reviewing the model further here, that will be done in the next Chapter within the context of a broader review of the current research in several areas of particular focus of the present study.

CHAPTER 3

Current Knowledge

In this Chapter, the research in several areas upon which the present study focussed will be selectively reviewed. Where possible, the emphasis is placed on research pertinent to female managers.

Sources of Stress for Female Managers

There is considerable evidence from several American and British surveys of women in management that female managers are subjected to a greater number of work-related pressures and problems than male managers, contributing to an increased risk of stress-related illnesses (Cooper, 1981; Cooper & Davidson, 1982; Hennig & Jardim, 1978; Kanter, 1977). Davidson and Cooper (1983, p. 8) identify these unique pressures and problems as including "burdens of coping with the role of 'token woman,' lack of role models and feelings of isolation, strains of coping with prejudice and sex stereotyping, and overt and indirect discrimination from fellow employees, employers, as well as the organizational structure and climate." Most of these pressures stem from past role attitudes held by society and slowly changing attitudes toward the new roles being adopted by women.

Women managers are also susceptible to additional stresses from what Cooper (1981) terms the "culture trap," involving sex stereotyped

behavior and personality attributes stemming from traditional sex-role expections. Larwood and Wood (1977) and Horner (1970) describe a number of internal blocks, that women can experience as a result of their early sex-role socialization. These include the "low expectations trap" in relation to male stereotyped activities, and fear of success, which can lower performance. It is possible that these factors potentially contribute to higher levels of stress for female managers who, as a minority group must function in organizations historically dominated by male values, policies and behaviors (Davidson & Cooper, 1983).

A major source of stress for female managers is home/work conflicts (Davidson & Cooper, 1980; 1983). Although stresses in this area are not unique to female managers, they are very much attenuated and have more salience in the case of females. This is supported by British and American studies which found that both working women and managerial and professional women in general, spend more time on child care and home duties than do their husbands (Berk & Berk, 1978; Gutek, Nakamura & Nieva, 1981).

Similar outcomes from home/work conflicts are evidenced in the reports of married female as compared to male managers, particularly those with children. Married female managers are less able to relax at the end of the day and evidence greater susceptibility to feelings of guilt, role conflict, work overload, tiredness and ill health (Bhagat & Chassie, 1981; Larwood & Wood, 1979). In essence, it would appear that values and attitudes have changed more slowly than social and work roles. Female managers, in the short run at least, would appear to be much more subject to the stresses associated with the dual roles of

"corporate manager" and "family manager" (Cooper, 1982). Potential sources of stress go beyond these considerations. Additional examples include spousal competition/jealousy and lack of support, as well as possible career blockage as a result of mobility problems.

Physical and Mental Effects of Stress

The study of the relationship between job stress and illness is complicated, because the work place may be a determinant of risk, or it may interact with stressors in the worker's personal life (Schwartz, 1983). Each individual will have their own unique life histories, demographic variables, experiences, behavior patterns and personality outcomes, the interactions of which will be instrumental in determining individual stress responses and health outcomes.

There is considerable evidence that male managers are suffering extreme physiological symptoms from stress at work, resulting in illnesses such as disabling ulcers and coronary heart disease that force premature retirement and a loss of potential service to organizations. Based on a ten-year longitudinal study of 350 British managers, Cooper and Melhuish (1980) identified a broad range of physical, emotional and behavioral symptoms of management stress, similar to those identified by Selye. Selye's (1956, 1976) diseases of adaptation represent the broadest and most widely used taxonomy of stress induced physical health outcomes. He reports that diseases such as psychiatric disturbance, cardiovascular disease, kidney disease as well as diabetes, migraines and gastrointestinal malfunctions are largely stress induced. Selye

(1976) also maintains that stress can impair the body's immune system which can make an individual more susceptible to infectious diseases and viral illnesses.

Clearly, the consequences of occupational stress need not be as dramatic as an heart attack or emotional breakdown. They can be reflected in irritability, performance decrements, poor decision making and a host of other behaviors. At the same time, this "gradual, insidious, daily gnawing away" (Cooper, 1982) can go unnoticed and in the long term do the most damage.

The work-stress illness relationship is less clear for females. Of significance here, is the fact that female health patterns have been changing. Increased incidence of coronary heart disease and peptic ulcers in females may be accounted for by their increasing numbers in the work force. Based on a reanalysis of the Framingham Heart Study data, Haynes and Feinleib (1980) found that working women did not have a significantly higher incidence of coronary heart disease than housewives. This relationship changed, however, when they compared married working women with children with housewives with children. They found that the incidence of coronary heart disease for working women increased with the number of children, while housewives showed a slight decrease with an increasing number of children. Haynes and Feinleib (1980) also found a substantial increase in incidence of heart disease in married versus single women. The extent to which this increased incidence of heart disease is a result of the additional work and family pressures is only a matter of conjecture, based on current knowledge.

Cooper and Melhuish (1984) found significant differences between male and female managers in terms of health manifestations, work stressors and personality. Male managers were found to be much more at risk for physical problems such as high blood pressure, poor health predisposition and poor physical fitness whereas female managers were much more vulnerable to mental health problems. In a study limited to female executives, Davidson and Cooper (1980a) found that with the exception of migraine headaches, the female executives did not report a high level of physical ill health, but did report significant psychological symptoms such as nervousness, fatigue and wanting to be left alone.

Finally, it should be noted that stress responses may also be manifest in behavioral outcomes such as increased smoking, drug and alcohol use, decreased job performance as well as interpersonal, and marital difficulties. Clearly, these outcomes can affect health and well-being and may themselves increase stress levels. While the complexity of factors involved makes it difficult to demonstrate the strength of the relationship between occupational stress and illness, there is ample evidence supporting the proposition that the role of occupational stress as a primary causative or contributing agent cannot be ignored.

Behavior Patterns, Stress and Health: Types A and B

Friedman and Rosenman (1974) have been pre-eminent in identifying and studying two behavior patterns, Type A and B, and their relationship to coronary heart disease (CHD) and other stress-related

psycho-physiological illnesses. Type A behavior pattern (TABP) is "characterized by enhanced or even extremes of competitiveness, striving for achievement, aggressiveness, impatience, hyper alertness, tenseness of facial musculature, explosive speech stylistics and chronic sense of time urgency which leads to acceleration of thought and of most actions" (Rosenman & Friedman, 1983, p. 52). In contrast, Type B behavior pattern is characterized by a more relaxed, easy going, satisfied and unhurried pattern.

The significance of TABP is that extensive research, both prospective and retrospective have found it to be a significant predictor of premature coronary heart disease (see Rosenman & Friedman, 1983; Price, 1982 for reviews). Type B behavior is associated with a significantly lower CHD risk. Results from the Western Collaborative Group 8½ year prospective study of 3,154 men indicate that TABP is a precursor of CHD and that Type A individuals have approximately twice the risk of developing CHD as Type B, are more than five times as likely to have a second myocardial infarction and have twice the rate of fatal heart attacks (Rosenman, Brand, Jenkins, Friedman, Strauss & Wurm, 1975). Moreover, these results are independent of other risk factors such as smoking, hypertension and high cholesterol levels (Rosenman et al., 1975).

Although TABP has been firmly established as a significant CHD risk factor, the specific mechanisms linking TABP and CHD remain elusive (see Dembroski, Weiss, Shields, Haynes & Feinleib, 1978 for a review). This is also true in terms of developmental antecedents of the TABP. Glass

(1977) has proposed a theory emphasizing the Type A individual's need for control over environmental demands, while Price (1982) has proposed a cognitive social learning theory framework to explain the behavior pattern.

Research evidence suggests that the characteristic Type A behaviors noted earlier tend to emerge when a susceptible individual is challenged or placed under pressure (Glass, 1977). This factor combined with the excessively strong work orientation of Type A's noted by Jenkins (1971) points to the significance of the relationship between the work environment and stresses and the elicitation of TABP. Chesney and Rosenman (1980b) point out that TABP represents the internalization of the western work ethic, suggesting that work environments not only enhance, but reward TABP. The costs, however, are high.

One of the most significant studies of managers to date has been carried out by Howard, Cunningham and Rechnitzer (1976, 1977). They examined 236 managers in twelve Canadian companies for TABP and other CHD risk factors and obtained a number of measures of job variables and work habits. Using the Structured Interview, 61% of managers were classified as Type A. Estimates between companies ranged from 50% to 76%. Those managers exhibiting extreme Type A behavior (27%) were found to be higher on a number of CHD risk factors than were Type B managers. The extreme TABP was also related to stress symptoms and there was a significant difference between Type A and B managers on an emotional distress factor which included symptoms such as restlessness, agitation, fatigue, depression and high use of tranquilizers. Although the Howard

et al. (1976, 1977) study was limited to male managers, a more recent study found TABP to be a significant predictor of general ill health for both female and male executives (Cooper & Melhuish, 1984), with female managers scoring higher than their male counterparts on measures of Type A behaviors.

There is other evidence that the detrimental outcomes of TABP go beyond health and job factors (Burke & Deszca, 1982a, Burke, Weir & DuWors, 1979). For example, Burke et al. (1979) reported that in a sample of eighty-five male administrators, high levels of TABP were associated with lower levels of spousal marital satisfaction and well-being. The authors suggested that this may be a reflection of the inordinate emphasis placed on work activity by Type A individuals.

There is evidence that there is a higher incidence of Type A behavior among women in the work force, than among housewives, especially among women who are not working purely due to financial pressure (Chesney & Rosenman, 1980b). In a study of employed men and women, Waldron and her colleagues (1978) found that for females, but not males, the Type A pattern and the Speed and Impatience scores on the Jenkins Activity Survey peaked in the thirty to thirty-five age group. In a discussion of these findings, Davidson and Cooper (1983) point out that 90% of working women in this age group have at least one child and spend one-third less free time than homemakers. It is perhaps not surprising that time pressures, overload and impatience become prevalent for working women in this age group.

At the same time, the issue of self-selection cannot be ignored. There is some evidence (Burke & Deszca, 1982b) that both females and males exhibiting TABP are attracted to jobs and organizational climates which reflect those behavioral and attitudinal propensities. It may be that Type A women are attracted to managerial positions. It is likely that the apparent higher level of TABP among women in the work force, and particularly among female managers, results from a combination of factors - role overload, self-expectations and organizational climate preferences being only a few.

Coping Patterns to Reduce Stress Levels

There is no generally accepted definition of coping and relatively little is known about the specific coping processes people use in adapting to stressful circumstances (Moos & Billings, 1982). After reviewing a number of definitions, Burke and Weir (1980) defined the coping process as referring:

> . . . to any attempts to deal with stressful situations which a person feels he must do something about, but which tax or exceed his existing response patterns. Coping behaviors can range from the most casual manoeuvres to complicated forms of problem solving; from the most highly proactive behaviors to the most pathologically reactive attempts, from the most rational to the most irrational efforts. Yet, all are undertaken with the same ultimate objectives - preventing, reducing or resolving the stress and its consequences. (p. 300)

Coping refers to both the cognitions and behaviors that people evince in their attempts to deal with stress. But not all coping behaviors are functional and individuals may exhibit both adaptive and maladaptive responses in attempting to prevent or manage stress (Cooper & Davidson, 1982; Lazarus & Launier, 1978).

The translation and operationalization of coping in the literature has been extremely diverse, making comparisons and generalizations difficult. For example, Burke and Weir (1980) identified some 40 different coping strategies, the vast majority of which have had no empirical verification as to their effectiveness. Coping has variably been operationalized in global terms such as referring to whether the subject uses relaxation techniques or exercises regularly (Davidson & Cooper, 1983); as very specific adaptive and maladaptive behaviors (Parasurman & Cleek, 1984) and as perceptions of one's own ability to cope in comparison to others (Davidson & Cooper, 1980). This diversity makes comparisons difficult and research has yielded inconsistent results.

In an early study, Burke and Belcourt (1974) found that the descriptions of coping by 65% of their sample of managers fell into five categories: 1. talking to others (18%); 2. working harder and longer (13%); 3. changing to engrossing non-work or play activities (12%); 4. analyzing the situation and changing the strategy of attack (11%); and 5. withdrawing physically from the situation (10%). Although subjects also described stressful situations and identified examples of effective and ineffective coping behaviors, the particular properties of

a situation determining the effectiveness or ineffectiveness of a response were neither examined nor measured. Howard, Rechnitzer and Cunningham (1974) took the research a step further by examining the relationship of ten categories of coping behavior to stress-related health outcomes in a sample of 300 managers. They reported that the most popular techniques for handling stress were: change to a non-work activity (64%), talk through with peers (49%); change strategy of attack (40%); compartmentalizing work and non-work life (40%); engage in physical exercise (35%). In terms of the relationship between coping behaviors and health outcomes Howard et al. (1975) dichotomized the sample into low and high symptom groups on the basis of a psychosomatic symptom measure. In comparing the groups they found five significant differences: the low symptom group made greater use of 1. building resistance, regular sleep, good health habits, and 2. talk through with peers on the job, and lesser use of 3. change strategy of attack on work, 4. talk through with spouse, and 5. change to a different work activity.

Although Howard et al. (1975) provided some evidence for differential effectiveness of coping strategies in terms of health outcomes, they did not find any significant differences in terms of the frequency of use of the 10 coping strategies and mean values on a variety of physiological parameters such as blood pressure and serum cholesterol levels. They did, however, find significant differences between male managers designated as Type A and Type B on the basis of the structured interview. Type A male managers made greater use of the

strategy of changing to a different work activity, a technique which when combined with "working harder" was related to higher psychosomatic symptom levels, thus rendering the strategy ineffective. Type B male managers made greater use of compartmentalizing work and non-work activities and talking with spouse.

In a recent study, Parasuraman and Cleek (1984) examined the role of adaptive versus maladaptive coping behaviors and personal characteristics in influencing the affective reactions of a sample of female and male managers to four role stressors. Interestingly, although they found that maladaptive coping behaviors served to heighten the level of stress experienced in response to role ambiguity, quantitative and qualitative overload and contributed to lower job satisfaction, contrary to expectations, adaptive coping behaviors failed to have significant beneficial effects in terms of either felt stress or job satisfaction. Hall (1972) in studying strategies for coping with role conflict in a sample of university-educated, married, working women, found that the act of coping versus not coping was more strongly related to satisfaction with one's career than the specific coping strategies employed. Additionally, Parasuraman and Cleek (1984) found no sex differences in terms of maladaptive coping behaviors but suggested that female managers engaged in more adaptive coping behaviors than their male counterparts.

These results notwithstanding, female managers reported higher felt stress levels than male managers. Parasuraman and Cleek (1984) suggest that this might be explained in part by the observed negative

relationship between sex and organizational tenure, suggesting that a lower level of experience in the organization rather than gender may account for the higher levels of stress reported by female managers.

In summary, this review suggests that the relationship between stressors, sex, personality characteristics, and coping and stress reactions are complex and require further study. Very little concrete evidence is available regarding stressors and effective coping strategies for female managers. Stress, health and coping outcomes are highly dependent on the complex interactions between sex-role stereotyping, level in the organization, psychological and physical variables. Well designed studies are needed, since the costs of stress remain high.

CHAPTER 4

Method

Research Questions

The major questions addressed in the research included the following:

1. Personal/job demographic variables and sources of stress

   i) Are there significant differences in personal and job demographic variables between male and female managers?

   ii) What is the nature and number of job, organizational, home and social sources of pressure experienced by female managers and are there significant differences in pressure scores between male and female managers and between management levels?

2. General health, affective states, job satisfaction and performance

   i) Are there significant differences between female and male managers and management levels in terms of psychosomatic symptoms and affective states and what is the nature of the differences?

   ii) Are there significant differences between female and male managers and management levels in terms of job satisfaction and work performance.

3. Type A behavior pattern

i) Are there significant differences between female and male managers and management levels in Type A scores?

ii) What is the relationship between Type A behavior pattern and psychosomatic symptoms and affective states for female and male managers?

4. Coping behaviors and measures used to relax

i) Are there significant differences in the adaptive and maladaptive managerial coping behaviors between female and male managers and management levels?

ii) Are there significant differences between female and male managers and management levels in terms of the measures they use to relax.

5. Stress profile

i) Overall, what are the significant job, organizational, social, home and individual sources of stress and what are the characteristics of female managers and male managers at high "risk" for stress-related illness, affective/mood disturbance, job dissatisfaction and poor work performance?

Subjects

All subjects in the study were employed in management positions. Of the 270 managers who returned completed Survey Questionnaires, 144 (53.3%) were female and 126 (46.7%) were male. In the total sample, 86 (31.9%) of the female managers and 89 (33.0%) of the male managers were

employed in the public sector while 58 (21.5%) of the female managers and 37 (13.7%) of the male managers were employed in the private sector. The public sector sample was drawn from 27 different departments within one government organization and the private sector sample was drawn from 18 corporations involved in a diversity of industries which included energy, mining, retail sales, publishing and banking, as well as personnel and medical services.

As there was an interest in the study in making comparisons of managers at different levels of management on a number of variables, the subjects were drawn from three management levels. These were described as "senior," "middle" and "junior" levels of management. In the public sector sample, selection to each of these levels was based on an existing management position classification system. In the private sector, "junior" manager was defined as being one level above a first-line supervisor, with subjects self-selecting into one of the three management categories based on their position and the management structure within their respective organizations.

The personal and job demographics of the sample will be examined in more detail in the next Chapter.

Materials

All instruments utilized in the study were self-report measures. It is recognized that there are certain limitations inherent in using self-report measures. Derogatis (1982) after having reviewed the strengths as well as the limitations of self-report measures concluded,

however, that the former outweighed the latter and that self-report measures are an extremely useful and flexible modality with which to carry out research.

In several areas, the measurement and evaluation of stress among managers utilized a modified version of a survey questionnaire developed and utilized by Davidson and Cooper (1983) in a study of stress among British women and men managers. The questionnaire was developed on the basis of indepth interviews with female managers at all levels of the management hierarchy as well as on the basis of extensive earlier research on managerial occupational stress (Davidson and Cooper, 1983). The questionnaire also reflects the Davidson and Cooper (1981b) model of occupational stress in female managers contained in Appendix B. The questionnaire is comprehensive and designed for use by both female and male managers at all levels of the management hierarchy.

The following are the variables of interest and measures utilized in the study:

1. Personal and job demographics - Section A of the questionnaire consisted of items related to the personal and job demographics of each manager believed to be important independent variables.

2. Job, organizational, home and social pressures - Section B of the questionnaire consisted of sixty-four potential job and organizational sources of pressure, thirteen potential home and social pressures and an "other" category. These items fall into the broad subcategories of: Factors Intrinsic to the Job, Roles,

Token Woman Factors, Career Development, Relationships at Work, Organizational Structure and Climate, and Home and Social Factors (see Appendix D). The categories are not intended to be exclusive, as a number of the items could be listed in more than one category (Davidson & Cooper, 1983). The pressure dimension was scored on a five-point Likert-type scale from 1 (no pressure at all) to 5 (a great deal of pressure).

3. Health measures - Section C of the questionnaire incorporated two health-related measures. In Part I, psychosomatic health was assessed on the basis of a modified version of the Gurin Psychosomatic Symptoms List. This scale was originally modified by Marshall and Cooper (1979) for a large-scale study of management stress in Britain and has subsequently been widely used as a stress measure in research (Davidson & Cooper, 1983). Respondents were asked to rate each of 20 symptoms into one of five categories - never, rarely, sometimes, often or always - based on behavior over the past three months and to answer "yes" or "no" to 4 general health questions. This yields an overall health score, ranging from 25 (extremely good health) to 107 (extremely bad health).

The Profile of Mood States (POMS) (McNair, Lorr & Droppleman, 1971) was included in Part II as a measure of current affective or mood states. The POMS consists of 65 adjectives describing mood, each rated on a 5-point scale from "not at all" to "extremely." The measurement context is "within the past week including today." On

the basis of repeated factor analyses of standardization samples, six primary mood states were derived (McNair, Lorr & Droppleman, 1971). These mood dimensions are labelled tension-anxiety, depression-dejection, anger-hostility, vigor-activity, fatigue-inertia, and confusion-bewilderment.

Each score is derived from the sum of ratings over 7 to 15 adjectives without item overlaps. A Total Mood Disturbance score was also calculated.

The reported internal consistency coefficients for the POMS range from .74 to .92 with test-retest coefficients of .61 to .69 based on a one-month interval (McNair & Lorr, 1974). The basic factor structure of the POMS has been confirmed through repeated factor analyses (Lorr, McNair & Weinstein, 1963; McNair & Lorr, 1964). It has demonstrated predictive validity in a broad range of studies involving both psychotherapy and psychopharmacology (Derogatis, 1982). Based on his review of the POMS, Derogatis (1982) concluded that it is a well-conceived and developed instrument that should prove to be a sensitive response oriented measure of stress.

It was concluded that as a measure of current affective or mood states, the POMS is a suitable instrument, with satisfactory measurement properties for current research purposes.

4. Job satisfaction and work performance - Part I of Section D included the short version of the Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Davis, England & Lofquist, 1967). The MSQ measures satisfaction with several different aspects of the work environment. Only the MSQ General Satisfaction scale score was utilized in the present study. The potential range of scores is 20 to 100, very dissatisfied to very satisfied. On the General Satisfaction scale of the short form, the authors report Hoyt reliability coefficients for a number of norm groups, ranging from .87 to .92 with a median reliability co-efficient of .90. Test-retest data were not available for the short form MSQ, however, the authors suggest that since the General Satisfaction scale of the long form MSQ uses the same 20 items, the test-retest correlations can be inferred from the test-retest correlations of the long form, which they report as .89 over a one-week period and .70 over a one year interval. The authors presented only limited validity data for this short form MSQ, but again suggested this could be inferred from the research conducted with the long form MSQ, related to occupational group differences and the studies of the relationship between satisfaction and satisfactioness as specified by the Theory of Work Adjustment which support the construct validity of the MSQ scales. Based on this review, it was concluded that the short form MSQ has acceptable reliability and validity for present purposes.

A category of variables intended to reflect manifestations of work stress in terms of detrimental effects on work performance were included as Part II of Section D. These 16 work performance measures were developed and utilized in the Davidson and Cooper (1983) study and involved asking, "How often do you feel the following at work?". Each work performance measure was scored on a five-point Likert-type scale from 1 (never) to 5 (always).

5. Managerial coping behaviors and measures used to relax - Part I of Section E comprised a measure of adaptive and maladaptive managerial coping behaviors developed by Parasuraman and Cleek (1984). They conceptualize adaptive coping as problem-solving approaches intended to deal directly with a stressful situation by seeking and implementing solutions. Maladaptive coping is conceptualized as emotional or defensive/self-protection approaches to dealing with stressful work experiences.

According to Parasuraman and Cleek (1984) the measure of adaptive and maladaptive managerial coping behaviors was developed de novo for their 1984 study. It was developed on the basis of responses to an open-ended questionnaire asking individuals to generate a list of possible behaviors by employees faced with stressful work conditions. Twenty respondents generated 176 unique responses which were then sorted into the specified categories by 12 judges. The content validity of the categorization was then determined by the method developed by Lawshe (1974). On this

basis, the category of adaptive coping behaviors consisting of 33 items such as planning, organizing, implementing and consulting others, and of maladaptive coping behaviors, consisting of 27 items such as working harder but making more mistakes, avoiding the supervisor and superiors, and trying to do two things at once, were established.

In completing the questionnaire, respondents were requested to check an item if they have used it "more than occasionally "over the previous two months to deal with difficult job situations. Subjects are able to check as many or as few items as they believe apply. The checked items are summed within each category to obtain measures of adaptive and maladaptive coping.

On the basis of responses of 300 female and male managers, Parasuraman and Cleek (1984) reported internal consistency reliability (coefficient α) of the measures of adaptive coping ($\overline{X}$ = 15.72; SD = 5.49) and maladaptive coping ($\overline{X}$ = 4.25; SD = 3.89) were .82 and .77 respectively.

This measure was chosen on the basis of its salience and the conclusion that its content validity and internal consistency reliability were satisfactory for research purposes.

Part II of Section E consisted of 11 items intended to measure the degree to which respondents adopted positive and negative stress-reducing behaviors. These items were utilized in the Davidson and Cooper (1983) study and were drawn from the coping

section of the Conflict/Stress Questionnaire developed by Steinmetz (1979). The first five items involve detrimental approaches to relaxation. These are "take aspirin," "use tranquilizers or other medication," "drink coffee, coke or eat frequently," "smoke," and "have an alcoholic drink." Items five through ten involve positive approaches to relaxation which are "use relaxation techniques," "use informal relaxation techniques," "exercise," "talk to someone you know," "leave work area and go somewhere." Finally, an "other" category was included.

6. Type A Behavior Pattern (TABP) - The Jenkins Activity Survey - (Form C) (JAS) (Jenkins, Zyzanski & Rosenman, 1979) was utilized to assess Type A behavior pattern. The JAS, which is the most widely used self-report measure of TABP, has repeatedly demonstrated convergent validity (70% to 73% agreement) with the structured interviews intended to measure the same behavioral complex (Jenkins & Zyzanski, 1980) and has shown substantial predictive validity concerning the prevalence of coronary heart disease (Jenkins, 1971, 1976; Jenkins, Rosenman & Zyzanski, 1974). The JAS consists of 52 items scaled in terms of multiple point discriminators. The instrument consists of four scales: Type A, Speed and Impatience, Job Involvement and Hard-Driving/Competitive, that distinguish Type A from Type B behavior (Jenkins et al. 1979). Only the overall Type A score was used in the present study.

Procedure

The data was collected in the period of May to August, 1985. In almost all cases, the Personnel Directors, Human Resources Managers of the corporations, or departments in the case of the public sector organization, were approached personally by the researcher and requested to distribute the Survey Questionnaire to female and male managers. To as great an extent as possible, an attempt was made to "balance" the sample in terms of surveying both female and male managers at comparable levels within each department or organization.

The Survey Questionnaire was accompanied by a covering letter which is contained in Appendix C, explaining the nature and objectives of the research and requesting voluntary participation. As will be noted, there were very slight differences in the covering letter forwarded to the public and private sector subjects. Subjects were requested to complete the materials as soon as possible or within one month of receipt. To ensure confidentiality, the Survey Questionnaires were distributed in stamped, addressed envelopes and completed materials were returned directly to the researcher. The overall response rate in terms of completed and returned Survey Questionnaires was 61.3% of those distributed. This is considered to be a good response rate for a field study of this nature and quite satisfactory for purposes of analysis.

Statistical Analysis

The principle statistical procedure employed to examine the above comparisons was Analysis of Variance. In the case of personal and job demographics, a one-way ANOVA was used to compare mean scores of the overall female and male sample on those items, followed by F-tests to determine significant differences in the personal and job demographic variables. A 2 x 3 (sex x management level) ANOVA was employed to test for sex and management level differences in terms of sources of pressure, psychosomatic health, mood states and total mood disturbance, job satisfaction, job performance, adaptive and maladaptive managerial coping, measures used to relax and Type A variables. A 2 x 2 (sex x sector) ANOVA was employed to test for sex and sector differences on the same variables (see Appendix F).

The multivariate statistical technique of step-wise multiple regression analysis was employed independently on the total female and male manager samples in order to identify and compare the predictors of each of the health, mood, job satisfaction and work performance scores. The independent variables for the step-wise analysis were:

1. Sources of pressure - Although factor analysis of responses to the sources of pressure items was considered, that analysis was precluded by the extent of the number of subjects where there was missing data on these items. As an alternative, for each subject, a total score was calculated for each of the categories within the sources of pressure questionnaire as

identified by Davidson and Cooper (1983). Scores were calculated for each of the categories: Factors Intrinsic to the Job; Roles; Token Woman Factors; Career Development; Relationships At Work; Organizational Structure and Climate; and Home and Social Factors. A listing of the questionnaire items contained within each of these categories is contained in Appendix D.

2. Type A behavior - Type A score derived from the Jenkins Activity Survey.

3. Managerial Coping behaviors - the adaptive and maladaptive managerial coping scores.

4. Measures used to relax - positive and detrimental relaxation scores computed by summing the responses to the five items comprising each category.

5. Indices of personal and job demographics - included in the analysis were age; sector; management level; marital status; number of children; age of children; educational attainment; additional professional qualifications; total number of years of full-time employment in present job, present organization and in life-time; and total number of companies/organizations worked for.

The dependent variables for the step-wise multiple regression analysis were:

1. General health - the total score assessed from the modified version of the Gurin Psychosomatic Symptom List.

2. Mood/affective states - the Total Mood Disturbance score as determined by the Profile of Mood States.

3. Job satisfaction - the General Satisfaction Score as assessed by the Minnesota Satisfaction Questionnaire.

4. Work performance - a single work performance score was computed by summing the responses given by each subject to the sixteen work performance items.

The objective of the multiple regression analysis was to identify and compare those sources of pressure, personal and behavioral factors that could predict risk to general and psychological health, job dissatisfaction and detrimental work performance, the analysis providing some indication of the characteristics of those female and male managers "at risk" for negative stress outcomes.

CHAPTER 5

Results

In this chapter, the outcomes of the statistical analyses performed on the data are examined. Initially, personal and job demographics are examined. Consideration is then be given to comparisons between female and male managers in terms of reported job, organizational, home and social sources of pressure. The high pressure factors overall and within management levels are examined. The female and male manager groups are compared in terms of adaptive and maladaptive managerial coping, measures used to relax and Type A scores. Sex and management level comparisons relating to psychosomatic health, moods, job satisfaction and work performance are examined. Similarly, the high stress outcomes for female and male managers overall and within management levels are examined. Finally, the predictors of each of the variables total psychosomatic or general health score; the total mood disturbance score of the POMS, job satisfaction and total work performance scores are considered.

Personal and Job Demographics

The personal demographics of the female (F) and male (M) samples are detailed in Table 1. The personal demographics of the F and M samples were compared using the one-way ANOVA followed by F-test to determine significant differences. The results of these comparisons are

Table 1

Personal Demographics of F and M Samples

Variable	Females Percentage (Number)	Males Percentage (Number)
Age		
Under 25	.4 (1)	.4 (1)
26-30	11.9 (31)	3.8 (10)
31-35	13.8 (36)	8.1 (21)
36-40	10.8 (28)	11.5 (30)
41-50	13.1 (34)	16.2 (42)
51-60	2.7 (7)	6.5 (17)
Over 60	.4 (1)	.4 (1)
Marital Status		
Married	30.9 (83)	38.3 (103)
Remarried	4.1 (11)	2.6 (7)
Living together	3.7 (10)	1.9 (5)
Single	8.9 (24)	1.9 (5)
Divorced-separated	5.2 (14)	1.9 (5)
Widow-widower	.4 (1)	.4 (1)
Number of children		
None	27.2 (70)	8.9 (23)
One	10.1 (26)	6.2 (16)
Two	11.3 (29)	16.0 (41)
Three	3.5 (9)	11.3 (29)
Four or more	1.6 (4)	3.9 (10)
Age of children		
Not applicable	25.3 (68)	9.7 (26)
All pre-school	5.6 (15)	3.7 (20)
Pre-school-school	3.3 (9)	4.8 (13)
All school	7.8 (2)	14.1 (38)
School-post-school	4.8 (13)	9.3 (25)
All post-school	6.3 (17)	5.2 (14)
Educational attainment		
Senior matriculation	12.2 (33)	11.1 (30)
Technical institute diploma	5.9 (16)	7.4 (20)
University degree	19.3 (52)	17.0 (46)
Masters degree	10.7 (29)	6.7 (18)
Ph.D degree	2.6 (7)	3.0 (8)
Other	2.6 (7)	1.5 (4)
Additional professional qualifications		
Yes	15.9 (42)	17.4 (46)
No	37.9 (100)	28.8 (76)

N: F = 144 M = 126

Note. Percentages are calculated on basis of total sample.

presented in Table 2. There were significant differences between the F and M samples in terms of age; and the number and age of children. The M sample was older than the F sample with the mean age range for men being in the 36 - 40 and 41 - 50 categories and 31 - 35 and 36 - 40 for the women. The M sample had a higher average number of children and older children than the F sample. This might be accounted for by the fact that a slightly higher proportion of the M sample indicated that they were "married," "remarried," or "living together" (see Table 1), a finding that is in line with that reported by Davidson and Cooper (1983) in relation to their sample of British male and female managers. There were no statistically significant differences between the F and M samples in educational attainment.

The job demographics of the F and M samples are detailed in Table 3, much of which was discussed in the previous Chapter. The differences between the F and M samples in terms of job demographics are presented in Table 4. Those differences relate primarily to employment profile and experience. That is, as compared to the F sample, a significantly higher proportion of the M sample reported having worked continuously as a full-time employee without leaving the work force. Concurrently, the managers in the M sample had worked a higher average number of years in full-time employment and had been a full-time employee of their present organization for a longer period.

Table 2

Personal Demographics: Significant Differences Between F and M Samples

Variable	Mean	S	F	P
Age				
Females	3.63	1.27	17.56	.0000
Males	4.28	1.21		
Number of Children				
Females	1.92	1.11	44.39	.0000
Males	2.89	1.21		
Age of Children				
Females	2.62	1.86	17.75	.0000
Males	3.53	1.65		

Note. Mean refers to mean category.

Table 3

Job Demographics of F and M Samples

Variable	Females Percentage (Number)	Males Percentage (Number
Sector		
Public	31.90 (86)	33.00 (89)
Private	21.50 (58)	13.70 (37)
Management level		
Senior	4.80 (13)	9.25 (25)
Middle	25.50 (69)	21.40 (58)
Junior	22.90 (62)	15.90 (43)
Worked full-time continuously		
Yes	24.80 (67)	35.90 (97)
Ever worked part-time		
Yes	38.90 (42)	17.60 (19)

	Mean Scores (SD)	Mean Scores (SD)
Number of years full-time employment present job	4.06 (3.9)	5.70 (5.7)
Number of years full-time employment present organization	7.80 (5.5)	11.60 (8.4)
Number of years in lifetime in full-time employment	14.70 (7.3)	20.10 (9.4)
Number of companies/ organizations worked for	3.65 (2.5)	4.00 (2.7)
Of those not worked continuously, number of years break from workforce	3.60 (4.2)	2.20 (2.0)

Table 4

Job Demographics: Significant Differences
Between F and M Samples

Variable	Mean	SD	F	P
Years full-time Present organization				
Female	7.81	5.45	19.40	.000
Male	11.50	8.39		
Years continuous full-time employed				
Females	14.65	7.33	28.55	.000
Males	20.14	9.37		

	Percentage	Chi-square	DF	P
Continuous full-time employment - yes				
Females	46.6 (67)	24.8	1.0	.000
Male	77.0 (97)			

Overall, there are relatively few significant differences between the F and M samples in terms of personal and job demographics. From a personal perspective, in comparing the samples, what emerges is a picture of a female manager who is slightly younger than her male counterpart; is less likely to be married/ remarried/living with someone and has fewer and younger children. In terms of job demographics, the female manager in the sample is less likely to have been continuously employed on a full-time basis and if she has, it is likely to have been for a fewer number of years than her male counterpart. She is also likely to have been employed for a lesser number of years on a full-time basis by the organization she is presently working for than her counterpart in the M sample.

Sources of Work Pressure

For each of the 77 potential sources of pressure, a 2 x 3 (sex X management level) ANOVA was used to identify any significant differences existing between the mean pressure scores (1 = no pressure at all to 5 = a great deal of pressure). In view of the size of the sample, as well as the number of comparisons being made, the relatively stringent level of statistical significance of $p<.001$ was accepted for purposes of reporting here. It was felt that in accepting this level of statistical significance that it would be more likely that observed differences would be of practical and clinical significance. (The interested reader will find that Appendix E contains a listing of those pressure items where comparisons yielded differences at the $p<.01$ and $p<.05$ levels of

statistical significance.) For ease of discussion, the significant differences in sources of pressure between the F and M samples will be discussed with reference to their respective subcategories (see Appendix D). These differences are presented in Table 5. On the basis of the accepted level of statistical significance, there were significant differences between the F and M samples on sources of pressure items within the "Token Woman", Career Development, Relationships at Work and Home and Social subcategories. On the same basis, there were no differences between the F and M samples on sources of pressure items within the Factors Intrinsic to the Job, Roles, and Organizational Structure and Climate subcategories nor were there any management level differences.

"Token Woman". As reference to Table 5 will confirm, the F sample had significantly higher mean pressure scores on three of the five items within this subcategory. Of particular note is the extent of the difference on the "performance" item, with female managers reporting significantly higher mean pressure scores in response to "feel I have to perform better at my job than colleagues of the opposite sex." Female managers also reported higher mean pressure scores in response to "members of the opposite sex at work try to force me into behaviors they associate with my sex rather than letting me be myself." Similarly the F sample reported higher mean pressure scores in reference to "lack of same sex role models - person of the same sex in a position above me, acting as an example." There were no significant differences between the F and M samples in terms of "being visible" or "feeling isolated" as sources of pressure at work.

Table 5

Sources of Work Pressure: Significant Differences Between the F and M Samples*

Source of Pressures	df	Mean F	Mean M	Mean Squares	F	P
Token Woman Factors:						
Members of opposite sex at work try to force men into behaviors they associate with my sex rather than letting me be myself	1	1.60	1.11	14.215	32.775	.000
Feel I have to perform better at my job than colleagues of the opposite sex	1	2.29	1.13	82.060	96.977	.000
Lack of same sex role models,	1	1.88	1.30	20.016	22.457	.000
Career Development:						
Sex discrimination and prejudice	1	2.01	1.35	26.066	28.646	
Inadequate job and training experiences as compared to colleages of opposite sex	1	1.59	1.23	8.466	12.869	.000
Colleagues of opposite sex being treated more favorably by management	1	2.16	1.34	40.853	35.606	.000
Feel my sex is a disadvantage when it comes to job promotion/ career progress prospects	1	2.24	1.13	76.992	81.231	.000
Relationships at Work:						
Members of the opposite sex seem uncomfortable working with me because of my sex	1	1.66	1.18	13.858	27.480	.000
Experiencing prejudiced attitudes at work from members of the opposite sex because of my sex	1	1.93	1.15	35.119	49.615	.000
Experiencing prejudiced attitudes at work from members of the same sex because of my sex	1	1.64	1.10	17.693	44.174	.000
Home and Social Factors:						
Conflicting responsibilities- running a home and career	1	2.25	1.58	25.428	23.128	.000
Earning more than my spouse	1	1.71	1.11	20.100	29.890	.000
Career-related dilemma about whether to start a family	1	1.72	1.17	16.469	20.916	.000
Lack of domestic support at home	1	1.77	1.45	15.135	13.905	.000

*p < .001 accepted as level of significance.

Career development. There were highly significant differences between the F and M samples in mean scores reported on four of the eight sources of pressure within this subcategory (see Table 5). All of these items involve sex-related factors that could potentially affect career development, and in all cases, female managers reported significantly higher mean pressure scores. "Sex discrimination and prejudice," "colleagues of the opposite sex being treated more favorably by management" and "I feel my sex is a disadvantage when it comes to job promotion/career prospects" were significantly higher sources of pressure for female managers. Although mean scores were relatively low for both samples, again, the F sample reported significantly higher mean pressure scores in relation to having "inadequate job and training experience as compared to colleagues of the opposite sex." As discussed earlier, there were, however, no significant differences in the educational attainment levels of the F and M samples.

Relationships at work. Although as can be seen in Table 5, the reported pressure levels on the significant items within this subcategory were not particularly high, there were three items on which the F sample reported significantly higher mean pressure scores. In contrast to the M sample, female managers reported that "members of the opposite sex seem uncomfortable working with me because of my sex" to be a greater source of pressure. The F sample also reported higher mean pressure scores in terms of experiencing prejudiced attitudes at work because of their sex in relation to members of the opposite sex and the

same sex. This has some support in terms of anecdotal and research evidence and is certainly an area of some sensitivity for female managers (Brown, 1981). Also, although the difference in mean pressure scores of the F and M samples was in the expected direction in relation to experiencing "sexual harassment of a verbal or physical nature," the difference was not significant.

Home and social factors. On four variables within this subcategory, female managers reported experiencing significantly greater pressure than male managers. "Conflicting responsibilities associated with running a home and a career" and "lack of domestic support at home" were the highest of the significant pressure items within this subcategory. Although the reported mean pressure scores associated with "earning more than my spouse/partner" and "my career related dilemma about whether to start a family" were not particularly high, the F sample scores were significantly higher than those of the M sample.

High Work Pressures Within Management Levels and Overall

The final stage of the analysis of sources of work pressure involved identification and comparison of high work pressures experienced by female and male managers overall and within management levels. For purposes of this analysis, following the approach of Davidson and Cooper (1983), a mean pressure score of 2.5 or above (1 = no pressure at all to 5 = a great deal of pressure) on questions dealing with job, organizational, home and social pressures was considered to be a high pressure factor. It is recognized that this is an arbitrary

level. The purpose of this analysis, however, was for comparison of these items with the significant sex and management level differences reviewed above. The analysis is based on the recognition that while significant differences may be observed, many of those items can be and were in fact at very low pressure levels for both sexes, giving no indication as to the factors female and male managers at each level of the management hierarchy experience as high sources of pressure within their job, organizational, home and social environments. The comparisons of the F and M samples and management levels on high pressure items are presented in Table 6.

Senior management. In comparing the high sources of pressure for senior managers, some care must be taken, as both samples were relatively small, particularly in the case of the female managers. Having acknowledged this, it can be seen from Table 6 that senior male managers identified a larger number of high stress factors than senior level female managers who in fact reported the lowest overall number of high pressure items. While they shared "time pressures" and "lack of control in my work environment" as high pressure factors, senior male managers identified a range of additional high pressure items. Of particular note is that senior male, as well as middle and junior level managers, reported "underpromotion - employed beneath my competence" as a high pressure factor. In contrast only female managers at the junior level identified this as a high stress factor. The highest pressure item for senior female managers was in relation to "lack of control in

Table 6

High Pressures for F and M Samples Within Management Levels and Overall

Management Level	Source of Pressure	Mean Female	Mean Male
Senior	Work overload	---	2.76
	Time pressures and deadlines	2.54	2.68
	Underpromotion	---	2.56
	Lack of control in work environment	2.77	2.68
	Lack of consultation and communication	---	2.56
	Firing someone	---	3.16
Middle	Work overload	2.83	2.71
	Time pressures and deadlines	2.80	2.86
	Rate of pay	2.53	2.66
	Lack of control in my work environment	2.58	2.74
	Office politics	2.88	2.78
	Lack of consultation and communication	2.71	2.78
	Staff shortages and turnover	2.74	---
	Firing someone	2.78	2.98
	Inadequate feedback on my work	2.54	2.51
	Underpromotion	---	2.52
Junior	Work overload	2.85	2.82
	Time pressures and deadlines	2.97	2.84
	Underpromotion	2.62	2.76
	Rate of pay	2.65	2.71
	Lack of control in my work environment	2.67	2.57
	Office politics	2.93	2.63
	Lack of power and influence	2.75	---
	Lack of consultation and communication	2.88	2.72
	Firing someone	2.82	2.93
	Unclear career progress prospects	2.63	2.55
	Feeling undervalued	2.65	2.51
Total Sample	Work overload	2.79	2.82
	Time pressures and deadlines	2.85	2.61
	Rate of pay	2.56	2.54
	Lack of control in my work environment	2.64	2.72
	Office politics	2.86	2.64
	Lack of power and influence	2.57	---
	Lack of consultation and communication	2.75	2.67
	Staff shortages and turnover	2.55	---
	Inadequate feedback on my work	2.76	---
	Firing someone	---	3.00

Note. A --- indicates that the mean score was less than 2.5 on that pressure item.

my work environment" whereas "firing someone" was the highest pressure item for male senior managers, and indeed, for male managers at all three management levels.

Middle management. There were significant similarities in the high pressure factors experienced by middle level female and male managers. Both groups identified "work overload," "time pressures and deadlines," "rate of pay," "lack of control in my work environment," "office politics," lack of consultation and communication," "firing someone," and "inadequate feedback on my work" as high pressure factors. In addition, female middle managers identified "staff shortages and turnover" as an high pressure item while "underemployed - employed beneath my competence" was identified by male middle managers. Female middle managers identified "office politics" as their highest source of pressure while "firing someone" was the highest pressure reported by male middle managers.

Junior management. Of the three management levels, both female and male managers at the junior management level reported the largest number of high pressure factors, with female junior managers reporting the highest number overall. As with middle management, there were significant similarities between the junior level female and male managers. They shared all of the same high pressure items, except for "lack of power and influence" which was an additional high pressure factor identified by female managers. Junior management level female managers identified "time pressures and deadlines" as their highest pressure items, followed closely by

"office politics." Again, "firing someone" was the highest pressure item for male junior managers.

Overall. Female managers overall identified a slightly greater number of high pressure items than male managers. In comparison with the 77 sources of pressure items contained in the study, both groups identified a comparatively small number of high pressure items. The F and M samples shared "work overload," "time pressures and deadlines," "rate of pay," "lack of control in my work environment," "office politics," and "lack of consultation and communication" as high sources of pressure. In addition, female managers reported "staff shortages and turnover" and "inadequate feedback on my work" as high pressure items. Male managers, on the other hand, also indicated that "firing someone" is an high pressure item and indeed, the highest pressure factor reported for male managers overall. For female managers overall, "office politics" was the highest pressure factor, followed very closely by "time pressures and deadlines."

In summary, sex differences accounted for all significant differences between the F and M samples in terms of sources of work pressure. Female managers reported a much larger number and consistently higher levels of work pressure. Almost without exception these pressure items were gender related, rather than job related. When high pressure factors were considered, there were many similarities between female and male managers within management levels and overall. Senior level female managers reported the lowest number of high pressure factors, while junior level female managers reported the highest number.

Overall, the high pressure factors were comparatively few in number. They fell predominantly within the Organizational Structure and Climate and Factors Intrinsic to the Job subcategories of sources of pressure and were job related rather than gender related. There was no overlap between the sources of pressure items for which there were significant differences between the F and M samples and the high pressure items. While the F sample consistently reported higher mean scores on the sources of pressure items on which there were significant differences, none of these reached what was considered a high pressure level (e.g., mean pressure score of 2.5 or greater) for purposes of this research. Taken as a whole, the results do support the contention that in addition to sharing a number of common sources of pressure with male managers, female managers face an additional unique range of stressors based on their sex.

Managerial Coping Behaviors and Measures Used to Relax

Managerial coping behaviors. There were no significant differences between the F and M samples in terms of either adaptive or maladaptive managerial coping behavior levels. Subjects responded by indicating whether they had performed each of the thirty-three adaptive and twenty-seven maladaptive coping behaviors more than occasionally in the past two months. Male managers reported mean level of adaptive coping behaviors was 24.07 compared with female managers mean of 23.09. Both samples reported low levels of maladaptive coping behaviors, with female managers reporting a mean of 4.41 in comparison with male managers mean of 4.00.

Measures used to relax. There were no significant differences between the F and M samples in terms of measures used to relax at the $p<.01$ level of statistical significance (see Appendix E for listing of the two items reaching the $p<.05$ significance level). In terms of the positive approaches to relaxation, "talk to someone you know" was the most frequently used approach reported by both the F ($M = 3.48$) and M ($M = 3.18$) samples. This was closely followed by "exercise" for both the female ($M = 3.07$) and male ($M = 3.04$) managers. The least frequently used positive relaxation measure, again by both males ($M = 1.42$) and females ($M = 1.40$) was "use relaxation techniques" such as meditation and yoga. The most frequently used detrimental relaxation measure for both the F ($M = 2.71$) and M ($M = 2.72$) samples was "drink coffee, coke or eat frequently," followed by "have an alcoholic drink" (F, $M = 2.43$; M, $M = 2.47$), with means suggesting relatively low reported usage of both measures. The detrimental relaxation measure least frequently utilized was "use tranquilizers or other medication" for both females ($M = 1.16$) and males ($M = 1.19$).

Type A Behavior Pattern

There was no significant difference between the mean Type A standard scores of female managers ($M = 3.45$) as compared to male managers ($M = 3.80$). Although these results do not support the Cooper and Melhuish (1984) and Davidson and Cooper (1983) findings of higher Type A scores for female as compared to male managers, this may be accounted for by the use of different measures of Type A behavior. The results are consistent with studies suggesting an

absence of sex differences in JAS Type A scores of females and males engaged in comparable activities and environments (Morell and Katkim, 1981). The mean Type A scores in the present study are considerably higher than the mean Type A score of 1.9 for a managerial sample reported in the JAS Manual (Jenkins, Zyzanski and Rosenman, 1979). When compared with the norms provided by Jenkins, Zyzanski and Rosenman (1979), the mean Type A scores for both samples fell at the 60th percentile, suggesting that both the F and M samples exhibit considerable Type A characteristics.

The Costs of Stress.

General health. As can be seen from the comparisons presented in Table 7, of the 20 symptoms and 4 additional health items contained in the modified Gurin Psychosomatic Symptom Checklist (Gurin et. al, 1960), female managers had significantly higher scores on 4 items, based on an acceptance of $p<.01$ as statistically significant (see also Appendix E). There were no significant management level differences.

Of those symptoms where female managers reported significantly higher mean scores, their highest score was indicated in response to the question, "Do you ever just want to be left alone?". This was followed by the response to "Are you ever troubled by headaches or pains in the head?". This finding corresponds with that of Davidson and Cooper (1983) and is not unexpected based on Wilkinson's (1980) research to which they refer, noting that three times as many working women as working men are affected by migraines and headaches. Finally, females in contrast to males

Table 7

Psychosomatic Symptoms: Significant Differences Between the F and M Samples*

	df	Mean F	Mean M	Mean Squares	F	P
Are you ever troubled by headaches or pains in the head?	1	2.47	2.10	6.963	8.017	.005
Are there times when you tend to cry easily?	1	2.23	1.38	45.972	81.063	.000
Do you ever just want to be left alone?	1	2.71	2.46	3.809	7.476	.007
Have you ever felt that you were going to have a nervous breakdown? (1 = no 2 = yes)		1.31	1.13	2.137	12.659	.000

*p < .01 accepted as level of significance.

reported higher scores in response to "times when you tend to cry easily?", although both scores were quite low. Female managers were also more likely to respond affirmatively to "Have you ever felt you were going to have a nervous breakdown?".

Overall, in terms of general health, the comparisons yield relatively few significant sex differences and where they do exist, the symptom degree is comparatively low. The limited number of significant differences between female and male managers contrasts with the work of Davidson and Cooper (1983) where they found a far greater number of significant differences in their sample of British managers. While the present results suggest that the general health level of female managers may be lower than that of male managers, the magnitude of the differences is comparatively small.

Profile of Mood States. There were no significant differences between the F and M samples on any of the six mood/affective states of the POMS or the Total Mood Disturbance (TMD) score. Additionally, the scores attained by both samples were generally low. In terms of the TMD, which ranges from a minimum of -32 to a maximum of 160, female managers reported a mean score of 18.80 and male managers a mean score of 13.35, with both scores being low.

Overall, the POMS results suggest a quite satisfactory level of mental health for both the F and M samples.

Job satisfaction. There were no significant sex or management level differences in job satisfaction as measured by the MSQ. Job satisfaction for the sample overall was quite high (M = 74.75). Male managers reported a mean job satisfaction score of 75.66 while female managers reported a mean job satisfaction of 73.96.

Work performance. Of the sixteen work performance items, as indicated in Table 8, female managers reported a significantly higher mean score (accepting $p<.01$) on only one item (see also Appendix E). Female managers reported significantly higher detrimental work performance in relation to feeling "lack confidence in putting forward my point of view (e.g., at meetings)." Male managers did not report significantly higher detrimental work performance on any of the items.

Also, as can be noted from Table 8, there was a significant difference between management levels in relation to being "unable to influence and persuade people" (see also Appendix E). Junior level managers reported greater detrimental performance in this regard than middle or senior level managers.

High General Health and Work Performance Within Management Levels and Overall

The final analysis focussed on identification and comparison of high scores on general health and work performance items reported by female and male managers within management levels and overall. As with sources of pressure, a mean score of 2.5 or more

Table 8

Work Performance: Signifcant Differences
Between F and M Samples and Management Levels*

	df	Mean F	Mean M	Mean Squares	F	P
Sex						
Lack confidence in putting forward my point of view (e.g., at meetings)	1	2.15	1.90	4.486	7.413	.007
Management Level	**df**	**Mean**		**Mean Squares**	**F**	**P**
Unable to influence and persuade people						
Senior	2	2.24		2.554	4.967	.008
Middle		2.21				
Junior		2.50				

*p < .01 accepted as level of significance.

in response to the psychosomatic symptoms and the work performance items was considered to be a high score. The high stress outcomes for female and male managers are presented in Table 9.

Senior management. Women in senior management indicated the lowest overall number of high stress outcomes. They shared the high frequency psychosomatic health symptoms of "getting tired very easily," and "smoking, eating, drinking more than should" with senior male managers. In addition, female senior managers reported a high frequency in relation to "just want to be left alone." Male senior managers also identified "being bothered by nervousness," "feeling fidgety or tense" and experiencing "feeling put out if something unexpected happens" as additional high stress outcomes.

While senior female managers identified "being unable to make decisions" as a high detrimental work performance item, none were indicated by senior male managers.

Middle management. Women in middle management positions reported considerably more high stress outcomes than middle level male managers. They shared the high frequency psychosomatic health symptoms of "trouble getting to sleep or staying asleep," "bothered by nervousness, feeling fidgety or tense," "get tired very easily" and "smoke, drink or eat more than should." Middle female managers also reported high frequency concerning the symptoms of "being troubled by headaches or pain in the head," "find it difficult to get up in the morning," "feeling mentally exhausted and having difficulty in concentrating" and "just want to be left alone."

Table 9

High Psychosomatic Symptoms and Work Performance for F and M Samples Within Management Levels and Overall

Management Level	Symptom/Performance	Mean Female	Mean Male
Senior	Get tired very easily	2.69	2.60
	Smoke, eat or drink more than should	2.69	2.60
	Just want to be left alone	2.54	---
	Unable to make decisions	2.54	---
	Trouble getting to or staying asleep	---	2.83
	Nervousness, feeling fidgety or tense	---	2.70
	Feel "put out" if someting unexpected happens	---	2.52
Middle	Trouble getting to or staying asleep	2.72	2.57
	Nervousness, feeling fidgety or tense	2.80	2.62
	Troubled by headaches or pains in the head	2.52	---
	Get tired very easily	2.84	2.66
	Find it difficult to get up in the morning	2.59	---
	Smoke, drink, eat more than should	2.75	2.60
	Feel mentally exhausted and trouble concentrating	2.51	---
	Just want to be left alone	2.74	---
Junior	Trouble getting to or staying asleep	2.53	2.98
	Nervousness, feeling fidgety or tense	2.75	2.76
	Troubled by headaches or pains in the head	2.51	---
	Get tired easily	2.90	2.63
	Find it difficult to get up in the morning	2.90	---
	Feel mentally exhausted and trouble concentrating	2.52	---
	Smoke, drink, eat more than should	---	2.72
	Just want to be left alone	2.71	---
	Feel "put out" if something unexpected happens	---	2.56
	Unable to cope well in conflict situations	2.61	---
	Unable to "sell myself" in competitive situations	2.56	---
	Unable to persuade and influence people	2.52	---
Total Sample	Trouble getting to sleep or staying asleep	2.61	2.76
	Nervousness, feeling fidgety or tense	2.74	2.68
	Get tired very easily	2.85	2.63
	Difficult to get up in the morning	2.69	---
	Smoke, eat or drink more than should	2.66	2.67
	Just want to be left alone	2.71	---

Note. A --- indicates that the mean score was less than 2.5 on that item.

Neither the middle level female or male managers reported any high detrimental work performance items.

Junior management. Women in junior management reported the highest overall number of high stress outcomes. As with males in junior management, they reported "trouble getting to or staying asleep," "bothered by nervousness, feeling fidgety or tense," "get tired very easily" and "just want to be left alone" as high frequency symptoms. Additionally, junior female managers identified "being troubled by headaches or pains in the head," "finding it difficult to get up in the morning" and "feeling mentally exhausted" as high frequency symptoms, all of which they shared with middle female managers.

Female managers at the junior management level highlighted "being unable to sell myself in competitive situations", "unable to cope well in conflict situations" and "unable to influence and persuade people" as high detrimental work performance factors. No high detrimental work performance factors were reported by junior male managers.

Overall. Female managers overall indicated two more high frequency symptoms than male managers. They shared "trouble getting to or staying asleep," "bothered by nervousness, feeling fidgety or tense," "get tired very easily" and "smoking, drinking, eating more than should." Female managers also further reported the high frequency symptom concerns of "difficult to get up in the morning" and "just wanting to be left alone."

There were no high detrimental work performance items shared by the total female or male manager samples.

In summary, while a number of significant sex differences were identified in terms of the costs of stress, specifically in relation to psychosomatic health symptoms and work performance items, these were comparatively few in number. Where significant differences were identified, female managers consistently scored higher. The magnitude of scores, however, was generally low for both samples. A single significant management level difference was identified related to a work performance item. There were no significant differences on any of the mood/affective dimensions of the POMS, with the scores generally being low, suggesting satisfactory mental health for both samples. Similarly, there were no significant differences in terms of job satisfaction, with both the F and M samples reporting quite high scores on this variable. Women at the junior management level reported the largest number of high frequency health symptoms, followed closely by middle level female managers. In contrast, women at the senior management level reported the fewest high frequency symptoms. The total female sample reported a slightly greater number of high frequency symptoms than the total male sample. There were considerable similarities in the high frequency symptoms reported by females and males at each management level, with high frequency symptoms as opposed to detrimental work performance items predominating. The few high detrimental work performance items identified were reported by senior and junior level female managers.

Predictors of General Health, Total Mood Disturbance, Job Satisfaction and Work Performance.

Thus far, the emphasis has been placed on examining the results with respect to the research questions concerning significant differences between female and male managers and between management levels. This final section of the Chapter will focus upon the results of analyses related to research questions concerning the relationships between a number of the variables in the study. The multi-variate statistical technique of step-wise multiple regression analysis was used independently on the total female and total male samples. The dependent variables for all analyses were the total general psychosomatic health score, the Total Mood Disturbance score of the POMS, the job satisfaction score and finally the total work performance score. The independent variables were the personal/job demographic variables, the total scores in each of the seven subcategories of potential occupational pressures, the Type A score of the JAS, the adaptive and maladaptive managerial coping scores as well as the combined scores for each of the positive and the detrimental relaxation methods. A tolerance level of .95 was chosen to control all analyses. The objective of these analyses was to identify and compare the predictors of general ill health, total mood disturbance, job dissatisfaction and detrimental work performance for female and for male managers, providing an indication of the characteristics of those female and male managers at "risk" for negative stress outcomes.

General health - female managers. In a step-wise multiple regression analysis to predict general health scores for female managers, the equation in Table 10 using five predictors of high general health scores, indicative of ill health, was obtained.

The major predictor of general ill health for female managers was the combined score for the use of detrimental relaxation methods. Specifically, for female managers, higher reported frequency of taking aspirin, using tranquilizers and other medication, drinking coffee, Coke or eating frequently, smoking, and having an alcoholic drink as relaxation methods are associated with higher general health scores.

There was a positive association between the Home and Social subcategory of sources of pressure and general ill health for female managers. This subcategory included pressures such as "not being able to move with my job in order to progress in my career," "my spouse's/partner's attitude toward my job," "demands of work on relationships with children and spouse/partner and lack of emotional and domestic support at home." This does give some support to the premise that home and social pressures, in addition to work pressures are predictors of ill health for female managers, which is consistent with the findings of Davidson and Cooper (1983) in their sample of British female managers. There was, however, a negative association between number of children and general health. Although only making a small contribution to the overall prediction, these findings suggest that as there is a decrease in the number of children reported by female managers there is an increase in reported ill health.

Table 10

Predicting General Health Score: F Sample*

Variable	Beta	T	SIG T
Detrimental relaxation methods	.41319	4.672	.000
Home and social pressures	.24442	2.614	.010
Highest educational qualification	-.28814	-3.358	.001
Number of children	-.18511	-2.083	.040
Factors Intrinsic to the Job pressures	.18669	2.052	.043
(Constant)		6.436	.000

Multiple R .679 $F = 13.01$, $df = 5,76$, $p < .001$

R^2 .461

* $p < .05$ accepted as level of significance

For female managers, there was also a negative association between the highest educational level attained and general health score, again with a small contribution to prediction. This gives some indication that female managers with lower educational levels are at greater risk for ill health.

The final predictor variable is the Factors Intrinsic to the Job subcategory of occupational pressures. The pressures subsumed within this category included work overload/underload, "time pressures and deadlines," "long working hours," managing/supervising, and "new challenges and risks." In general, the pressures within this category are those usually associated with the role of being a manager. For female managers, however, factors such as using detrimental relaxation methods and home and social pressures make a greater contribution to the prediction of ill health.

General health - male managers. Utilizing the same step-wise multiple regression procedure to predict the general health scores of male managers, the equation in Table 11 using three predictor variables was obtained.

As with female managers, the combined score for the use of detrimental relaxation methods was also the most prominent predictor of ill health for male managers. Again, underscoring the impact on health of negative stress-induced coping behaviors.

Table 11

Predicting Health Score: M Sample*

Variable	Beta	T	SIG T
Detrimental relaxation methods	.56543	6.627	.000
Factors Intrinsic to the Job pressures	.49944	5.796	.000
Having additional professional qualifications	.19093	2.253	.027
(Constant)		.995	.3229

Multiple R .676 F = 21.88, df = 3,78, $p < .001$

R^2 .461

* $p < .05$ accepted as level of significance

Also, as was the case with female managers, the pressures associated with the Factors Intrinsic to the Job subcategory emerged as a significant predictor of ill health for male managers. In the case of male managers, however, a somewhat stronger relationship was evidenced. The identification of pressures such as work overload, long working hours and supervising/managing others as a significant predictor of ill health for male managers is consistent with the occupational stress literature (see Holt, 1982). While pressures associated with Factors Intrinsic to the Job emerged as significant predictors of ill health for both female and male managers, it is of particular significance from the perspective of this research that unlike female managers, pressures associated with home or family did not emerge as predictors of ill health for male managers.

The final predictor of ill health for male managers, making a small contribution, is having additional professional qualifications. Although the basis of this relationship is not clear, one possibility, given that many additional professional qualifications are obtained in combination with employment, is that the added demands of courses and studies impact on the health of the male managers.

Total Mood Disturbance - female managers. Again, utilizing the step-wise multiple regression procedure to predict the Total Mood Disturbance (TMD) score of the POMS, the equation reported in Table 12, using five variables was obtained.

Table 12

Predicting Total Mood Disturbance Score: F Sample*

Variable	Beta	T	SIG T
Detrimental relaxation methods	.46454	5.875	.000
Maladaptive managerial coping	.22748	2.579	.011
Management level	.23523	2.820	.006
Career Development pressures	.24446	2.818	.006
Highest educational qualification	-.21184	-2.473	.015
(Constant)	--	-5.019	.000

Multiple R .730 F = 17.42, df = 5,76, $p < .001$

R^2 .534

* $p < .05$ accepted as level of significance

The strongest association was between the combined score for the detrimental relaxation methods, described earlier, and TMD. The frequency of use of detrimental relaxation methods was also the major predictor of ill health for female managers.

The regression analysis also identified the maladaptive managerial coping score as a significant predictor of TMD. This makes considerable sense, given that Parasuraman and Cleek (1984) conceptualize managerial maladaptive coping as emotional or defensive/self-protection approaches to dealing with stressful work experiences, with behaviors such as working harder but making more mistakes, avoiding superiors and supervisors and trying to do two things at once being indicators of maladaptive coping.

Management level was also associated, although to a lesser degree, with TMD. The analyses indicating that for female managers, the highest TMD scores are associated with the junior management level, and the lowest with the senior management level.

The Career Development subcategory of occupational pressures was also a significant predictor of TMD for female managers. Pressures within this category include over/under promotion, "feeling that one's sex is a disadvantage when it comes to job promotion," "sexual discrimination and prejudice," "inadequate job training and experience as compared to colleagues of the opposite sex" and unclear career

prospects. While experiencing these pressures makes a relatively small contribution to the overall equation, this association is supportive of the premises underlying this research.

Finally, as with general health, there was a negative and small relationship between the highest educational level attained and TMD.

Total Mood Disturbance - male managers. The step-wise multiple regression analysis to predict TMD for male managers resulted in the equation presented in Table 13 using three variables.

The strongest predictor of TMD for male managers was the maladaptive managerial coping score. The maladaptive managerial coping score, described earlier, was also a predictor of TMD for female managers, but to a lesser degree than for their male counterparts. Also, for male managers, there was a negative association between the adaptive managerial coping score and TMD. Adaptive managerial coping is conceptualized by Parasuraman and Cleek (1984) as problem-solving approaches intended to deal directly with a stressful situation by seeking and implementing solutions. Given adaptive managerial coping involves behaviors such as planning, organizing, implementing and consulting others, the negative association with TMD is not unexpected. The strengths of the relationships, however, suggest that for male managers, the extent of utilization of maladaptive coping behaviors have a greater detrimental impact on the individual's mood or affective state than the utilization of adaptive coping strategies.

Table 13

Predicting Total Mood Disturbance Score: M Sample*

Variable	Beta	T	SIG T
Maladaptive managerial coping	.45445	4.960	.000
Relationships At Work pressures	.33790	3.742	.000
Adaptive managerial coping	-.22244	-2.494	.014
(Constant)		- .971	.334

Multiple R .631 $F = 17.24$, $df = 3,78$, $p < .001$

R^2 .534

* $p < .05$ accepted as level of significance

The Relationships at Work subcategory of occupational pressures emerged as a significant predictor of TMD for male managers. Among the sources of pressure in this category are variables such as "lack of support from superiors," "lack of social support from people at work," "lack of encouragement from superiors," "working relationships with subordinates and superiors of both sexes and experiencing prejudiced attitudes from members of same and opposite sex because of one's sex." This does give support to the importance of the relational aspects of the working environment with respect to the mood and affective states of male managers.

Job satisfaction - female managers. For female managers, only two variables significantly predicted job satisfaction; the final equation is contained in Table 14.

For female managers, the strongest predictor, and negatively associated with job satisfaction was the Occupational Structure and Climate subcategory of occupational pressures. This subcategory contained pressure items such as "lack of control in my work environment," "office politics," "lack of power and influence," "lack of consultation and communication" and "inadequate resources and finances." The relationship of these types of pressures to job satisfaction/dissatisfaction makes considerable sense. It is important to note also that while pressures such as office politics, lack of power and influence and lack of consultation have been thought to differentially affect female managers (see Kanter, 1977), these pressures were also the major predictor of job satisfaction/dissatisfaction for male managers (see Table 15).

Table 14

Predicting Job Satisfaction: F Sample*

Variable	Beta	T	SIG T
Organizational Structure and Climate Pressures	-.50511	-5.549	.000
Highest educational qualification	-.27788	-3.053	.003
(Constant)		27.708	.000

Multiple R .589 F = 21.00, df = 2,79, p < .001

R^2 .347

* p < .05 accepted as level of significance

Table 15

Predicting Job Satisfaction: M Sample*

Variable	Beta	T	SIG T
Organizational Structure and Climate pressures	-.54908	-4.963	.000
Maladaptive managerial coping	-.43780	-4.752	.000
Number of companies/organizations worked for	-.23268	-2.806	.006
Factors Instrinsic to the Job pressures	.31181	2.919	.004
Age of children	-.24010	-2.611	.010
Adaptive managerial coping	.19293	2.258	.026
(Constant)		14.213	.000

Multiple R .697 F = 11.81, df = 6,75, $p < .001$

R^2 .485

* $p < .05$ accepted as level of significance

Although a much less prominent predictor, a negative association was also evidenced between highest educational level attained and level of job satisfaction. The results indicating that for female managers, a higher level of educational attainment is predictive of lower levels of job satisfaction.

Job satisfaction - male managers. As the final equation contained in Table 15 indicates, six variables which significantly predict job satisfaction for male managers were identified in the regression analysis.

As mentioned above, the Organizational Structure and Climate subcategory of occupational pressures was the major predictor and negatively associated with job satisfaction for male managers, as it was for female managers. This suggests that one can be quite confident that the types of pressures subsumed within this subcategory are significantly related to job satisfaction for managers generally. This was, however, the only predictor of job satisfaction shared by female and male managers.

The maladaptive managerial coping score was negatively associated with job satisfaction for male managers. Not surprisingly then, male managers reporting higher maladaptive coping scores report lower levels of job satisfaction. Although making a very small contribution, the adaptive managerial coping score was found to be positively associated and a predictor of job satisfaction for male managers.

It was also found that the total number of organizations worked for was negatively associated with job satisfaction. This does suggest that a person with a high level of job satisfaction is perhaps less likely to change organizations, while those who are dissatisfied may continue to seek organizations where they might experience job satisfaction.

Somewhat inexplicably, there was a very small, but positive association between the Factors Intrinsic to the Job subcategory of occupational pressures and job satisfaction. While an explanation for increasing job satisfaction being associated with increased pressures is not readily apparent, this finding might suggest a need for some optimal level of stimulation in the work environment, which if not met results in lowered job satisfaction, while increased pressure does contribute to job satisfaction until some optimal pressure level is attained.

Also there was a very small and negative association between the age of the male manager's children and job satisfaction. The male managers with older children report lower levels of job satisfaction than male managers with younger children. Perhaps this might reflect opportunity and comparative involvement in work which could be expected to vary with the age of children, or it might reflect differing stages of career development and associated job satisfaction. The results are, however, inconsistent with the earlier findings of Caplan (1975) that job satisfaction tends to increase with age.

Work performance - female managers. In a step-wise regression procedure to identify predictors of work performance for female

managers, the equation reported in Table 16 using five variables was identified, with higher scores being indicative of poorer work performance.

The major predictor of work performance for female managers was the level of pressures associated with the Factors Intrinsic to the Job subcategory of occupational pressures. This makes considerable sense, as that subcategory is very job oriented, incorporating pressures that are commonly associated with the management role. It is also worth noting that the Factors Intrinsic to the Job subcategory contains very few of what could be considered sex-related pressures.

A negative association between the JAS Type A score and work performance was observed. This suggests that for female managers, those scoring higher in terms of Type A behavior, report lower work performance scores, indicative of better work performance. Given that it is self-perceived work performance that is being considered, it would be expected that most Type A's would perceive themselves as achievers, almost by definition. This is also reinforced by most organizations tacitly favoring the enhanced competitive and achievement orientation of the Type A individual. It might also be that female managers feel that they have to express these characteristics in order to be seen as performing satisfactorily.

Both the maladaptive and adaptive managerial coping scores were associated to a significant but small degree with work performance for female managers. Not surprisingly, maladaptive coping was positively

Table 16

Predicting Work Performance Score: F Sample*

Variable	Beta	T	SIG T
Factors Intrinsic to the Job pressures	.46984	5.034	.000
JAS Type A score	-.25819	-2.844	.005
Maladaptive managerial coping	.26357	2.827	.006
Number of children	-.19215	-2.196	.031
Adaptive managerial coping	-.18951	-2.126	.036
(Constant)		5.948	.000

Multiple R .647 F = 10.98, df = 5,76, $p < .001$

R^2 .419

* $p < .05$ accepted as level of significance

associated with work performance, indicating a deterioration in work performance as maladaptive coping behaviors increase. Adaptive coping was positively associated, indicating an improvement in work performance as adaptive coping behaviors increase.

Finally, there was a small and negative association between number of children and the female managers' work performance, suggesting that as the number of children increases, work performance is better. This is one of the few findings contradictory with support of the suggestion that female managers have greater involvement in family and home responsibilities than male managers and that home/work conflicts have a greater impact on female managers.

Work performance - male managers. Regression analysis identified three variables which significantly predict work performance for male managers. The final equation is contained in Table 17.

The major predictor of work performance for male managers is the pressures associated with the Relationships at Work subcategory of occupational pressures. The results suggest that as increased pressure is experienced in terms of lack of support and encouragement from superiors, lack of social support at work, working relationships with subordinates, colleagues and superiors of both sexes, the work performance of male managers deteriorates.

Table 17

Predicting Work Performance Score: M Sample*

Variable	Beta	T	SIG T
Relationships at Work pressures	.25198	2.414	.018
Maladaptive managerial coping	.27959	2.640	.010
Adaptive managerial coping	-.22229	-2.156	.034
(Constant)		7.297	.000

Multiple R .443 F = 6.35, df = 3,78, p < .001

R^2 .196

* p < .05 accepted as level of significance

As with female managers, again making only small contributions, both the maladaptive and adaptive coping scores were associated with work performance for male managers.

This concludes examination of the outcomes of the statistical analyses performed on the data. In the main, the significant findings are that female managers experience higher work and home/work conflict pressure levels and a greater number of negative stress outcomes than male managers. Almost without exception, these additional pressures are based on sexual discrimination and prejudices from both organizational/corporate policies and from others at work. At the same time, significant similarities between women and men managers in terms of characteristics, work performance and the "high" pressures and negative stress outcomes were evidenced. A number of similarities and differences were evident in the "at risk" profiles of the F and M samples. Although some of the same variables were predictive of negative stress outcomes for managers of both sexes, the strengths of relationships were sometimes quite different in degree. The strongest relationship evidenced for females was between pressures associated with Organizational Structure and Climate factors and job dissatisfaction. For males, the strongest predictive relationship was between the level of pressures experienced with respect to Relationships at Work and Total Mood Disturbance score, indicative of mood/affective problems.

CHAPTER 6

Discussion

In the initial portion of this Chapter, the findings of the study are integrated. The implications and relevance of these findings are examined. The Chapter concludes with the offering of suggestions for future research.

Integration of Results

The primary purpose of this research was to ascertain the job, organizational, home and career pressures experienced by female managers and effects on the physical and mental health and overall well- being of this occupational group. The research has identified the sources and levels of pressure experienced by 144 female managers at three different levels of management in comparison with 126 of their male counterparts, with similar comparisons of physical, psychological and behavioral variables and outcomes. Secondly, the relationships of demographic, pressure, relaxation and coping strategies to health and behavior were explored in terms of identifying the characteristics of the female and male managers most "at risk" for negative stress outcomes.

The Davidson and Cooper (1981b) model of occupational stress in female managers presented diagramatically in Appendix B, was adopted as the framework for the present research. The model is based on the contention that research into stress and female managers must examine the influences of organizational and extraorganizational as well as individual sources of stress. Briefly, the model incorporates three

arenas where potential pressures emanate and an outcome arena. In addition to job demographics, the Work Arena encompasses potential pressures within the subcategories of Factors Intrinsic to the Job, Roles, "Token Woman", Career Development, Organizational Structure and Climate and Relationships at Work. Potential pressures within the Home and Social Arena incorporate factors such as home/work conflicts, spousal/partner support, child care issues and dual career conflicts. The Individual Arena reflects individual differences and determinants such as family background, socialisation, stress coping ability and Type A behavior pattern. The model predicts that as pressures within each of these arenas increase and interact, that these will be expressed in a variety of negative physical and psychological health and behavioral outcomes in the Manifestation Arena. The measures included in the present research were designed to examine each of the arenas and many aspects of the Davidson and Cooper (1981b) model. A major premise underlying the model, tested in the present research, is that while female managers experience many of the same pressures as male managers, they also encounter additional gender-related and home pressures, which potentially places them at greater risk for stress-related illnesses and outcomes (Davidson, Cooper & Chamberlain, 1980; Davidson and Cooper, 1982). The extent to which this model and premises as well as related research can be supported, are the focus of this integration of the research results.

Significant differences and similarities of the F and M samples. The findings of the research in terms of significant differences between the F and M samples in relation to demographics, sources of pressure and outcomes in terms of psychosomatic symptoms and work performance are shown in Table 18. Although relatively few in number, the significant demographic differences are reflective of the often differing career paths and profiles of female managers referred to in the literature (Rothwell, 1984). That is, women managers are less likely to have had a "continuous" career, most often as a result of a "family break." The female sample are younger and have fewer and younger children. They also have fewer years of full-time employment with their present organization and in their lifetime. To the extent that these differences in career profile translate into lesser work experience and fewer training opportunities for the female sample, this could be expected to be a contributing factor to differing perceptions of potential pressures and possibly higher levels.

An important finding is that sex differences accounted for all significant differences between the F and M samples, suggesting that these differences are consistent across management levels. Also, female managers reported a much larger number and consistently higher levels of work, home and social pressures. They also reported a larger number of psychosomatic symptoms and a significantly higher score on one work performance item. These findings with respect to female managers are very consistent with Davidson and Cooper's (1983) findings in relation to their sample of British female and male managers. Interestingly, however, while they found a number of work pressures and stress outcomes unique to male managers, none were found in the present sample.

Table 18

Statistically Significant Mean Score Differences for
F Sample Compared with M Sample

WORK ARENA	HOME AND SOCIAL ARENA	INDIVIDUAL ARENA
Demographics		
Discontinuous work profile**	Fewer children**	Younger in age**
Fewer years continuous full-time employment**	Younger children**	
Fewer years full-time with present organization**	Earning more than my spouse/parnter**	
Token Woman		
Members of opposite sex at work try to force me into behaviors they associate with my sex rather than letting me be myself**	Lack of domestic support at home**	
Feel I have to perform better at my job than colleages of opposite sex**	Conflicting responsibilities associated with running a home and a career**	
Lack of same sex role models**	Career-related dilemma about whether to start a family**	
Career Development		
Sex discrimination and prejudice**		
Inadequate job and training experiences as compared to colleages of opposite sex**		
Feel my sex is a disadvantage when it comes to job promotion/career prospects**		

Table 18 - continued

WORK ARENA	HOME AND SOCIAL ARENA	INDIVIDUAL ARENA
Relationships at Work		
Members of the opposite sex seem unfomfortable working with me because of my sex**		
Experiencing prejudiced attitudes at work from members of the opposite sex because of my sex**		
Experiencing prejudiced attitudes at work from members of same sex because of my sex**		
STRESS OUTCOMES		
Psychosomatic Symptoms:		Work Performance:
Headaches or pains in head*		Lack confidence in putting forward my point of view
Times when tend to cry easily**		
Times when just want to be left alone**		
Felt like going to have a nervous breakdown**		

Note: F sample mean scores higher on all variables except demographic.

* $p < .01$
** $p < .001$

A disturbing finding is the nature of the higher pressures experienced by female managers. Almost without exception, where significant differences exist, the pressures are gender, rather than job related. This is also evidenced by the finding that there were no significant differences between the F and M samples on pressures within the Factors Intrinsic to the Job subcategory. Rather, they are external - discriminatory based pressures which tend to be beyond the immediate control of the individual. These additional pressures reflect organizational and individual prejudice and discrimination as well as the isolation experienced by female managers. The dilemma faced by women managers in this respect is underscored by the finding that they experience prejudiced attitudes from both males and females at work. Unfortunately, the results suggest that the socialization process, sex role stereotypes and occupational sex-typing, as well as discriminatory organizational policies, continue to have a negative impact on female managers. The cross-cultural nature of these findings is also supported by the high degree of similarity with the findings of Davidson and Cooper's (1983) study in Britian.

Similarly, the findings support the contention that marital, home and family pressures are more salient for female managers than male managers. Female managers reported significantly higher pressure in relation to earning more than their spouse, and lack of domestic support. They also reported higher pressures with respect to conflicting responsibilities associated with running a home and a

career and the career related dilemma about whether to start a family. It was also found that experiencing home and social pressures was a significant predictor of ill health for female, but not male, managers. These findings support the contention of Davidson and Cooper (1981b) that female managers are more subject to stresses associated with the dual roles of "corporate manager" and "family manager" than their male counterparts and that this must be recognized in any consideration and model of stress and female managers.

It should be noted that while the F sample consistently reported higher mean scores on the pressure items on which there were significant differences, none of these reached what was considered a high pressure level (e.g., mean score of 2.5 or greater). As a comparison of Table 18 with Table 19 containing the "high" pressures and outcomes will confirm, there was no overlap between the two analyses of pressure items. Two outcome measures on which significant differences were found, "headaches and pains in the head" and "just want to be left alone" reached the "high" pressure level.

There are a number of possible explanations for the comparatively "low" pressure levels attributed to the "discrimination and prejudice" items. One could speculate that this is a function of the cognitive appraisal of the female managers and perhaps an expectation as to what Hennig and Jardim (1978) describe as the difficult environment that female managers will face as a result of their sexual identities in choosing a managerial career. That recognition, perhaps leads to

perceptions of the pressures associated with sexual discrimination and prejudice as being lower. Alternatively, one might speculate that the discriminatory based pressures are at a comparatively low level and are reflective of positive shifts in attitudes and policies. The comparatively small number of gender-related discrimination and relational items on which there were significant differences give some support to this speculation. In either case, however, there is still cause for concern when one considers the stress levels of female managers from a cumulative perspective. While at a low level individually, these external discriminatory and home and social pressures are additional to the range of high pressures shared with the male managers, as are several of the stress outcomes. Of concern, the finding is that cumulatively, additional pressures are placed on female managers within a profession already classified as highly stressful, increasing the risk of stress- related illnesses and outcomes.

Female managers did report significantly higher scores on four psychosomatic symptoms. The findings with respect to "headaches and pains in the head" is in line with research (Wilkerson, 1980) indicating generally that three times as many working women as working men are affected by migraines and headaches. Although the scores were quite low, the higher frequency of "tend to cry easily" reported by female managers may be as reflective of our culture as it is of a stress outcome difference. Female managers are also more likely to respond affirmatively to the question, "Have you ever felt you were

going to have a nervous breakdown?". While this may be taken as lending some support to Cooper and Melhuish's (1984) findings that women managers tend to be more vulnerable to mental health problems in contrast to the physical problems of their male counterparts, it is important to note that there were no significant differences on any of the other sixteen psychosomatic symptoms, nor on any of the scales or on the Total Mood Disturbance score of the POMS.

Women managers only differed significantly from male managers on a single work performance item relating to "lack confidence in putting forward my point of view." This finding of women's lack of confidence in themselves has often been noted in the research as an inhibiting factor to women's career development (Rothwell, 1984). It is perhaps not surprising, given the discriminatory pressures faced by female managers. From a positive perspective, the finding of a significant difference on only one work performance item suggests that this sample of female managers is generally not experiencing a significant stress-related deterioration in work performance and skills, nor is their experience in this respect substantively different from their male counterparts. This is one area in which the results suggest that the stresses associated with the "culture trap" involving sex stereotyped behavior and personality attributes stemming from traditional sex-role expectations and resulting lowered female work performance may have been overemphasized in the literature (Cooper, 1981; Larwood and Wood, 1977).

High pressures and outcomes. When the "high" pressures and stress outcomes contained in Table 19 are considered, it becomes apparent that there are considerable similarities between female and male managers at each level of the management hierarchy. This is particularly evident at both the junior and middle management levels where there were only minimal differences in terms of the types of pressures and nearly equivalent numbers of high pressure items for both sexes. The results suggest from this perspective at least, that there are more similarities in the experiences of occupational stress of women and men managers than might have been anticipated. At the same time, there is a line of findings in a diversity of research comparing male and female managers on a wide range of skills and characteristics, which has identified very few sex-based differences (see Brown, 1981 for a review).

Senior level female managers reported the lowest overall number of "high" pressure items and outcomes. Both their "high" pressures and outcomes were considerably lower in number than managers of either sex at the middle and junior levels, and particularly the middle and junior level female managers. Although the limited size of the senior female manager sample suggests these findings need to be interpreted cautiously, they do point to a possible important heterogeneity and need to differentiate between female managers at different management levels. The findings with respect to senior level female managers may

Table 19

High Pressure Factors and Their Outcomes for F and M Samples

FEMALES	FEMALES AND MALES	MALES
	SENIOR MANAGERS	
	Time pressures and deadlines Lack of control in my work environment	Work overload Underpromotion Lack of consultation and communication Firing someone
OUTCOME	OUTCOME	OUTCOME
Just want to be left alone	Get tired very easily	Trouble getting to or staying asleep
Unable to make decisions	Smoke, eat or drink more than should Drink coffee, coke, eat frequently to relax	Nervousness, feeling fidgety or tense
		Feel "put out" if something unexpected happens

Table 19 - continued

FEMALES	FEMALES AND MALES	MALES
	MIDDLE MANAGERS	
Staff shortages and turnover rates	Work overload Time pressures and deadlines Rate of pay Lack of control in work environment Office politics Lack of consultation and communication Firing someone Inadequate feedback on work	Underpromotion
OUTCOME	OUTCOME	OUTCOME
Headaches, pains in head	Trouble getting to or staying asleep	Have an alcoholic drink
Difficult to get up in morning	Nervousness, feeling fidgety or tense	
Mentally exhausted and trouble concentrating Just want to be left alone	Smoke, drink, eat more than should	

Table 19 - continued

FEMALES	FEMALES AND MALES	MALES
	JUNIOR MANAGERS	
Lack of power and influence	Work overload Time pressures and deadlines Underpromotion Rate of pay Lack of control in work environment Office politics Lack of consultation and communication Firing someone Unclear career progress prospects Feeling undervalued	
OUTCOME	OUTCOME	OUTCOME
Headaches and pains in head	Trouble getting to or staying asleep	Feel "put out" if something unexpected happens
Difficult to get up in morning	Nervousness, feeling fidgety or tense	Smoke, drink, eat more than should
Mentally exhausted and difficulty in concentrating	Get tired very easily	
Unable to "sell myself" in competitive situations	Just want to be left alone	
Unable to cope well in conflict situations	Drink coffee, coke, eat frequently to relax	
Unable to persuade and influence people		

Table 19 - continued

FEMALES	FEMALES AND MALES	MALES
	TOTAL SAMPLE	
Lack of power and influence	Work overload	Firing someone
Staff shortages and turnover	Time pressures and deadlines	
Inadequate feedback on work	Rate of pay	
	Lack of control in work environment	
	Office politics	
	Lack of consultation and communication	
OUTCOME	OUTCOME	OUTCOME
Difficult to get up in morning	Trouble getting to or staying asleep	
Just want to be left alone	Nervousness, feeling fidgety or tense	
	Get tired very easily	
	Smoke, drink, eat more than should	
	Drink coffee, coke, eat frequently to relax	

be reflective of "survival of the fittest," with only the very capable and strong female managers rising to the senior management ranks. At the same time, they also give some support to the concerns expressed earlier with respect to the health and performance risks in relation to the cumulative pressures experienced by women managers and that this needs to be given particular attention at the junior and middle management levels.

In terms of the overall F and M samples, there were few differences in relation to "high" pressures and outcomes. While managers of both sexes reported political/competitive and evaluative pressures, the reporting of "lack of power and influence" and "inadequate feedback on my work" by female managers but not males may suggest differing perspectives and needs in this respect.

Predictors of negative stress outcomes. Perhaps then, the discussion can turn to the predictors of negative stress outcomes formulated using step-wise multiple regression analysis. Although these predictors should be interpreted cautiously, they do provide a number of clues as to factors which place female and male managers "at risk" in terms of psychosomatic ill health, mood disturbances, job dissatisfaction and poor work performance. A number of similarities and differences were evident in the profiles, with some of the same variables being predictive of negative stress outcomes for managers of both sexes, although the strengths of relationships were sometimes quite different in degree. The strongest relationship evidenced for

females was between pressures associated with Organizational Structure and Climate factors and job dissatisfaction. For males, the strongest predictive relationship was between experiencing pressures related to Relationships at Work factors and Total Mood Disturbance score, indicative of mood/affective problems.

In terms of a composite, the female manager most "at risk" in relation to psychosomatic ill health symptoms is more frequently using detrimental relaxation methods such as taking a variety of medications, drinking coffee, Coke or eating frequently and smoking and having an alcoholic drink as a means of relaxing. She is experiencing pressures associated with her home and social environments and is likely to have a lower educational level and is experiencing work pressures from factors intrinsic to the job, such as work overload, time pressures and deadlines, long working hours, and managing/supervising people. The profile of the "at risk" male manager is similar in that he also reports frequent use of detrimental relaxation methods and is experiencing pressures from factors intrinsic to the job. He is also likely to have additional professional qualifications. For both female and male managers, the results lend support to the repeated references to the negative health effects and risks associated with using measures such as smoking and drinking to cope with stress. For female managers, this was further supported by the relationship between detrimental relaxation methods and Total Mood Disturbance. Particularly notable was the finding that Home and Social factors are a stronger predictor

of ill health for female managers than work-related pressures, with no such indication for males. Also, although at a low level, number of children was a predictor of ill health for female managers. In combination, these results lend some support to the view that home/work conflicts and responsibilities are more salient for female managers and have an impact on their health.

The female manager most "at risk" for mood/affective problems is, again, frequently using detrimental relaxation methods. Also, she more frequently uses maladaptive managerial coping behaviors to deal with pressures. She is likely at the junior management level and is experiencing pressures in relation to career development such as under-promotion and feeling that her sex is a disadvantage in terms of training and promotion prospects. The male manager most "at risk" for mood/affective problems is making more use of maladaptive managerial coping behaviors. He is also experiencing significant pressures in terms of relationships at work such as lack of support from superiors and others at work, in terms of working relationships with supervisors, peers and subordinates of both sexes and feeling uncomfortable working with members of the opposite sex. He is also making less use of adaptive managerial coping behaviors. The findings do provide some evidence in support of the position that not all coping behaviors are functional and that individuals may exhibit both adaptive and maladaptive coping responses in an attempt to prevent or manage stress, which will impact on the stress outcomes (Lazarus and Launier, 1978).

The results also suggest that adopting maladaptive coping behaviors may be more salient in terms of negative outcomes. For female managers, the finding of a relationship between management level and mood problems is not unexpected and supports the finding that junior level female managers reported the largest number of "high" pressures and stress outcomes. Most notable in terms of male managers was the impact on mood of pressures associated with relationships at work. As this was also the strongest predictor of poor work performance for male managers, it suggests that these pressures are particularly salient for male managers and that they may have interpersonal skill deficits which need to be addressed.

In terms of being "at risk" for job dissatisfaction, the strongest relationship evidenced for both sexes was in relation to experiencing pressures related to the structure and climate of the organization, such as lack of control in the work environment, lack of power and influence or consultation and communication, office politics and inadequate resources. In addition, the female manager "at risk" is likely to have a higher education level. The male manager is also frequently using maladaptive managerial coping behaviors, has worked for quite a number of organizations, is experiencing pressures associated with his work, has older children and is utilizing fewer adaptive managerial coping behaviors. Notable for female managers is education level again appearing as a predictor in this case, somewhat contradictory to the findings that female managers with lower

educational levels are at greater risk for ill health. While there is no readily apparent explanation in terms of job satisfaction it may be that female managers are more likely to be placed in peripheral positions which offer less challenge or opportunity, resulting in lower levels of job satisfaction for female managers with higher educational levels. Whatever the explanation, there is still evidence that a lower educational level is a risk factor for female managers in terms of ill health giving support to the importance of educational opportunities and preparation for female managers. It is most likely that providing meaningful management opportunities for female managers would eliminate the negative association between educational attainment and job satisfaction.

Finally, turning to the risk factors for poor work performance, the composite of the female manager is a woman experiencing work pressures, has a lower level of Type A behavior, more frequently uses maladaptive and less frequently adaptive managerial coping behaviors, and has younger children. Males "at risk" for poor work performance are experiencing pressures associated with relationships at work, more frequently use maladaptive and less frequently adaptive managerial coping behaviors. An interesting finding was the association between lower Type A scores and poor work performance for female managers. As suggested in the previous Chapter, this might be expected given that higher Type A's are more likely to see themselves as achievers in terms of their work performance. It may also reflect the performance

pressures on female managers and their feeling that they have to express Type A characteristics in order to be seen as performing satisfactorily. A final point relates to the maladaptive and adaptive managerial coping behaviors. Although they were predictive of negative stress outcomes for both female and male managers, the strength of the relationships varied, and they do appear to be more salient in managing negative stress outcomes for male managers. One might speculate that, as compared to work pressures, many of the gender-related pressures experienced by female managers are beyond their immediate control and are not as readily mediated by the adaptive and maladaptive coping behaviors examined, and as a consequence, are less salient for female managers in terms of moderating negative stress outcomes.

Implications

The present research has confirmed that assessed cumulatively, women managers experience significantly higher levels of work and home pressures and negative stress outcomes than their male counterparts. Almost without exception, these differences are gender-related. That is, resulting from sex-based organizational policy and individual prejudice and discrimination. While there are important similarities, the findings suggest that the work and career experience is in many ways different for female managers as compared to male managers. The present discussion will focus on the individual, organizational and societal implications of these findings, outlining some of the salient underlying issues as well as approaches to change and career development and training needs supported by this research.

It should be noted at the outset that while the discussion has tended to focus on the significant differences between female and male managers, this should not obscure the many similarities determined in the present research. There were no significant differences in terms of any of the mood dimensions or on the Total Mood Disturbance Score of the POMS. This was also the case in terms of frequency of use of adaptive and maladaptive managerial coping behaviors and in terms of measures used to relax. Female and male managers reported similar levels of job satisfaction. There were no significant differences in Type A behavior scores. There was only a significant difference in a single work performance item. Also, the many similarities in terms of "high" pressures and stress outcomes were noted above.

In respect of the similarities, these findings are consistent with much of the comparative research, which has found few substantive differences between female and male managers (Brown, 1981). As an example, Donnell and Hall (1980) in a study comparing the management behavior of two thousand female and male managers concluded that it was a "significant case of no significant difference." Similarly, Harlan and Weiss (1980) studied a matched sample of fifty male and female managers, seeking sex-based differences that might lead to management success. Instead, their major finding was a striking degree of similarities between female and male managers, leading them to observe as quoted by Brown (1981):

> Men and women were found to have very similar psychological profiles of high power and achievement needs, high self-esteem, and high motivation to manage. In addition, both men and women experienced difficulty in understanding and planning their careers; obtaining balanced useful feedback; and obtaining opportunities for new skill development. (p. 68)

While Harlan and Weiss (1980) observe that female and male managers have more similarities than differences in terms of barriers to career development, they do recognize that the primary difference is sex bias. They suggest that organizations can reduce the impact of sex bias through efforts directed at total human resource development, with programs addressing the issues of affirmative action, selection and promotion criteria, and supervisory training and managerial development.

To a considerable extent, Harlan and Weiss's (1980) findings and observations reflect the findings of the present study. While emphasis in the discussion will be placed on the implication of the present findings and needs of female managers, particularly in relation to sexual bias and discrimination, this should not be allowed to completely overshadow the many commonalities of experiences and needs of managers of both sexes. As Rothwell (1984) has pointed out in discussing the issue of equal and differential treatment of men and women managers, "all too often, one suspects, they are treated similarly when they should be treated differently and differently when

they should be treated in the same way" (p. 4). While difficult to attain, it would seem that there is some "appropriate" balance in achieving managerial development and change for managers of both sexes. Also, in focussing on the significant differences between female and male managers, it is important that these not be considered deficiencies, as the present research does not in any way support that perspective.

In the same vein, the finding of many similarities between male and female managers should not in itself be interpreted as "cause for rejoicing." Quite the contrary, the fact that managers of both sexes experience a considerable number of occupational stressors and negative health and behavioral outcomes is cause for concern. Similarly, the finding that both sexes report relatively high Type A scores indicative of considerable Type A characteristics associated with a variety of health risks, is suggestive of the need for Type A behavior modification programs for managers of both sexes.

In observing that there are many similarities in barriers to career development encountered by female and male managers, with sex bias being the primary difference, one should not lose perspective. The composite comparative picture of the woman manager that emerges from this research raises a number of concerns. She is a woman who, in addition to experiencing the same considerable work pressures and negative outcomes as her male counterpart, is experiencing pressures from being forced into behaviors associated with her sex rather than

letting her be herself. She is isolated in terms of lack of same sex role models and feels that she has to perform better than her colleagues of the opposite sex. In terms of relationships at work, she is pressured by experiencing prejudiced attitudes from members of both the same and opposite sex because of her sex, with members of the opposite sex seeming uncomfortable working with her because of her sex. She perceives her career development to be blocked by sexual discrimination and she sees her sex as a disadvantage in terms of job promotion/career prospects. She feels she has inadequate job and training experience as compared to her male colleagues who she also perceives as being treated more favorably by management. In addition, in the home and social sphere, she experiences pressures from conflicting responsibilities associated with running a home and a career, a lack of domestic support, from earning more than her spouse and she faces the career related dilemma about whether to start a family. She also pays the price of these pressures in terms of headaches, times when she tends to cry easily or just wants to be left alone or sometimes feeling that she is going to have a nervous breakdown. Also, her work performance is affected in terms of her lacking confidence in putting forward her point of view.

On the basis of this composite, based on the present research, one cannot escape the conclusion that the experience of work is significantly different for women and men managers and that women managers continue to face sex-based barriers and impairments to their

career progress and development. The parallels between the present findings and the barriers faced by women in masculine sex-typed occupations identified by Rosen (1982) in reflecting on ten years of research in this area are striking. Identified by women managers as being among the more common barriers to career entry and progression were: (1) exclusion or tokenism; (2) discrimination; (3) limited political skills; (4) conflicts between work and home; (5) competition from peers; (6) poorly articulated career goals; and (7) limited promotion opportunities (Rosen, Templeton & Kichline, 1982). While, comparatively, the pressures of sex discrimination and prejudice in terms of organizational/corporate policy and from others at work are at a "low" level, the findings do suggest that attitudes and barriers to the career development of women managers have been slow to change. While some gains are apparent, equality of opportunity in career development is definitely not yet a reality.

While there are many issues involved, the most basic issues relate to getting women into the managerial ranks, retaining them there, and providing opportunities for their development and progress within those management ranks. There are, of course, many perspectives on how these objectives and particularly equality of employment opportunity might be achieved. To date, as a country, Canada has taken much less formal approaches to affirmative action, directed to achieving more equal employment opportunities for women, than countries such as the United States and Great Britain where these initiatives are supported by

legislative sanctions. It is not the intention to become involved here in the debate and many issues surrounding affirmative action. Suffice it to say that both the imposed and voluntary approaches to achieving equal employment opportunities have their supporters and detractors. There is, however, agreement on at least two points. If equality of opportunity is to be achieved, the changes made must take into account the educational system, the socialization process, government policy and political awareness to name only a few common aspects; secondly, sole reliance cannot be placed on legalistic approaches; individuals, organizations and governments must work together if gains are to be made (Cooper and Davidson, 1982; Hennig and Jardim, 1978).

As one reviews the literature related to equal opportunities and career development strategies for women managers, it becomes clear that there are an overwhelming number of individual, group and organizational techniques and strategies for potentially fostering the equality of treatment of women managers and enhancing their development and progress within organizations (Ball, 1984; Greenfeld and Rawson Zacur, 1984; Hennig and Jardim, 1978; Rothwell, 1984). It becomes evident, however, that it is not the "ways" that are in question, but the "will." As Rothwell (1984) points out, each organization must carry out an internal diagnosis of their structure and policies in order to identify the gaps and blockages and priorities in terms of strategically planning career development within their organization. She also makes the point that this must be backed by the power,

commitment and resources at the top of the organization. Bough (1984), writing about the experience of implementing Equal Opportunities in IBM, suggests that equal opportunities can only be examined and implemented within the context of each organization's internal and external environment, personnel policies, practices and beliefs. In other words, while there are any number of strategies available, these must "fit" the organization. Similarly, Rothwell (1984) has suggested that a mix of "appropriate" tactics and techniques will include "top-down" and "bottom-up" approaches as well as a combination of structural and procedural policy changes in the organization. As well, measures to assist in developing individual abilities need to be considered.

Although the present research did not specifically examine the managers' views or efficacy of the many strategies and techniques that might put female managers on a more equal footing and remove some of the impediments to career development, the findings do support many of the suggestions made in the literature (Cooper and Davidson, 1982; Davidson and Cooper, 1983; Hennig and Jardim, 1978; Rothwell, 1984; Terborg, 1985). As an example, the present findings related to home/work conflicts support the need for organizations to examine their policies related to child care, maternity and paternity leaves, as well as re-entry programs. More flexible working arrangements, such as flex- time, part-time and job sharing need to be considered. Issues related to dual career families, such as relocation policies, also need

to be addressed. While each manager needs to address role conflict issues in light of their own circumstances, it would appear that examination and adjustment of corporate policies could potentially assist in easing some of the pressures identified in this study.

There are a broad range of management and personal development and training implications following from the present study relating to both sexual discrimination and prejudice issues as well as broader personal and management development perspectives. In terms of addressing the sexual discrimination and prejudice issues, as well as relational pressures, there seems to be quite universal agreement that one of the most critical factors is influencing and changing attitudes of both men and women within the organization. Terborg (1985) suggests there should be opportunities within management training to explore gender and work role issues as well as female/male awareness workshops. Similarly, Davidson and Cooper (1983) suggest that there is a need for specialized management courses for men and women, designed to explore the potential problems of working together and coping, and directed to promoting better understanding, attitudinal and behavioral changes in both female and male managers. Rothwell (1984) indicates that the limited experience of training men and women to cope with the problems of working together does suggest there is some value in this approach. She also makes the valid point that more research needs to be addressed to the issue, as training directed only at making women more like men is unlikely to be effective in the long run.

It is frequently suggested that female managers would benefit from special seminars directed to breaking down the effects of the socialization process in terms of assisting them to gain higher levels of confidence, changing their self-image as well as understanding the politics of organizations (Crocker, 1979; Rothwell, 1984). Interpersonal and assertion skills are also frequently mentioned. The findings of the present research in terms of the high pressures and stress outcomes lend some support to these contentions. This is particularly clear at the junior management level where female managers identify "office politics," "lack of consultation and communication", "unclear career progress prospects" and "feeling undervalued" as high pressures and detrimental work performance in terms of being unable to sell self in competitive situations or to cope with conflict situations. An important point, too, is that with the exception of the detrimental work performance items, junior male managers reported almost the same high pressures, suggesting that programs as described should not be limited to female managers, but extended to male managers as well. Also, the relationship between relational pressures at work and mood and work performance problems for males suggest the need for training opportunities to improve interpersonal skills for male managers generally.

Similarly, while career assessment and planning are important for managers of both sexes, the present findings in terms of pressures and obstacles to career development support the proposition that formal and

informal career planning and assessment are critical for women managers. Crocker (1979) suggests that if female managers are to survive in organizations and gain promotions to the middle and senior management ranks, career planning for women is a top priority. She suggests that with guidance and advice from counsellors and senior managers, female managers need to develop flexible career paths. Hennig and Jardim (1978) have expressed similar views. They propose that the most critical decision facing the woman manager is whether she wants to succeed in a management career, given the variety of obstacles, and if the answer is in the affirmative, she must be much more specific in terms of her career planning than men. Developing programs and workshops for personal, career evaluation and planning and goal-setting are possibilities supported by the present study that organizations should consider. Again, this research suggests that the need is particularly salient at the junior management level and that male managers could also benefit from such approaches. Mentors, support groups and networking have also been proposed in the literature as techniques which can possibly further and enhance the careers of female managers.

Organizations need to be more aware of the pressures and negative stress outcomes experienced by managers of both sexes such as identified in this research. As an example, with the exception of senior level female managers, managers at all levels reported high levels of pressure associated with work overload, time pressures and

deadlines, lack of control in work environment, as well as lack of consultation and communication. Davidson and Cooper (1983), commenting on similar findings in their study, suggested that managers of both sexes need to learn how to cope effectively with these types of pressure through time management and also that individuals and organizations need to investigate and reappraise their personal and organizational consultation and communication networks and systems. The importance of focussing on coping is supported by the relationship between maladaptive and, to a lesser degree, adaptive managerial coping behaviors and negative stress outcomes for both male and female managers. There are other examples of the similar needs of women and men managers. Based on the pressures and outcomes identified in the present research, the opportunities for managers to learn both informal and formal relaxation and other stress management techniques should be supported by organizations (see Murphy, 1984, for a review). The research also suggests that managers of both sexes could benefit from learning techniques or programmes to modify their Type A behavior.

Finally, an important implication of the research, is that while emphasis is often placed on individual stress management which should not be ignored, the research suggests that individual approaches will not be sufficient. Organizational and structural policy as well as attitudinal changes must also be pursued if advances are to be made in moderating the pressures experienced by women managers.

Perhaps, this section can end where it began, with the observation that for true equality of opportunity to become a reality for female managers will require considerable time and effort at the individual, organizational and societal levels. An important point made by Hennig and Jardim (1978) intended to be reflected in this discussion of the implications of the study, is that most of the changes needed and most of the issues are not "women's issues," but are quality of work life issues that affect both women and men alike. Hennig and Jardin (1978) place these issues and the implications of research such as that here, in this needed perspective when they state:

> Today's issue of equal employment opportunity may well be tomorrow's issue of equal right to survival - survival as individuals, families and corporations. If this is what we all face in our future then the need for the co-operation and coalition of employers and employees, men and women, majority and minority, is clear. Ours is a joint problem which only we, together can hope to resolve. We can no longer afford the ease of self-definition that we get from measuring and maintaining these differences between us. We must struggle to find the strength of our common humanity, move forward to attack those issues which threaten all our rights to a just, decent and rewarding work life. (pps. 238-239)

Future Research

The present research provided confirmatory evidence in support of some of the limited earlier research in relation to the occupational stress and health of female managers as well as providing some new perspectives in this area. There are a number of research avenues that might follow from the findings and limitations of the present study.

A limitation of the present study was the small sample of senior level female managers. Although there was some positive evidence of lower pressures and negative stress outcomes being experienced by this group, suggesting it might be important to differentiate between female managers at different management levels, any conclusions must await confirmation from further research. There is a need for similar research with a larger sample of senior level female managers. An interview format that might provide a more indepth examination could be considered. Particular emphasis should be placed on examining the strategies which senior female managers have found effective in dealing with occupational and home pressures and enchancing their career development. Also, ways in which these might be conveyed to middle and junior level female managers should be explored.

While the present research was able to provide some support for a variety of techniques and strategies directed at modifying individual and organizational attitudes and enhancing career development of women managers, it did not specifically address the views and perceptions of female and male managers in this regard. Research is needed in terms

of program and training and development needs as viewed by the managers themselves. There are many areas in which program development and evaluation research might be pursued. As an example, research is needed in organizations on alternative approaches to increasing gender awareness of managers of both sexes and modifying discriminatory attitudes and organizational climates.

Similarly, the present research did not specifically examine the perceptions of male managers of female managers. It would be useful in further comparative research of this nature to include a scale such as the Women as Managers Scale (Peters, Terborg & Taynor, 1980) as it might allow for a clearer indication of perceptions of women managers as well as an opportunity to compare female and male manager's perceptions within the organization's context.

Longitudinal research exploring the nature of pressures experienced by a sample of female managers from career entry might provide some useful perspectives on changing needs at different points in the career development path.

Finally, in future research utilizing questionnaires similar to those utilized here, consideration should be given to incorporating a "lie" scale to measure consistency of response and possible response sets, such as the portrayal of a "faking good" or "macho" image by female or male subjects.

Summary and Conclusions

The present study was exploratory and examined the nature of the stress, health and coping of women managers in comparison with their male counterparts. The significantly increasing numbers of women entering management careers and the possibility that they might face higher levels of pressure and consequently be placed at higher risk for stress- related illnesses provided the major impetus for this research.

The results of the study confirmed that, assessed cumulatively, female managers experience higher pressure levels and a greater number of negative stress outcomes than male managers. Almost without exception, these additional pressures are based on sexual discrimination and prejudices from both organizational/corporate policies and from others at work. Also, pressures associated with home/work conflicts were identified as being more salient for female managers. At the same time, the research provided evidence of many important similarities between women and men managers in terms of characteristics, work performance and the "high" pressures and negative stress outcomes experienced. There was some evidence that it might be important to differentiate between female managers at different management levels, as senior female managers indicated a considerably lower number of "high" pressures and negative stress outcomes than their female or male counterparts at the middle and junior management levels.

Overall, one can conclude that the experience of work is very different for women managers, as they continue to face sex-based barriers and impairments to their career progress and development, not experienced by their male counterparts. It can be concluded that, unless the additional occupational, home and career pressure confronting women managers are addressed at the individual, organizational and societal levels, true equality of employment opportunities will not be a reality for women managers. At the same time, failure to address those issues will result in continued economic, human resource and talent losses to organizations and it could be expected that an already bleak stress-related occupational health picture could be expected to deteriorate even further. Finally, in addressing these issues, the important differences, as well as similarities in needs of both women and men managers must be recognized and addressed.

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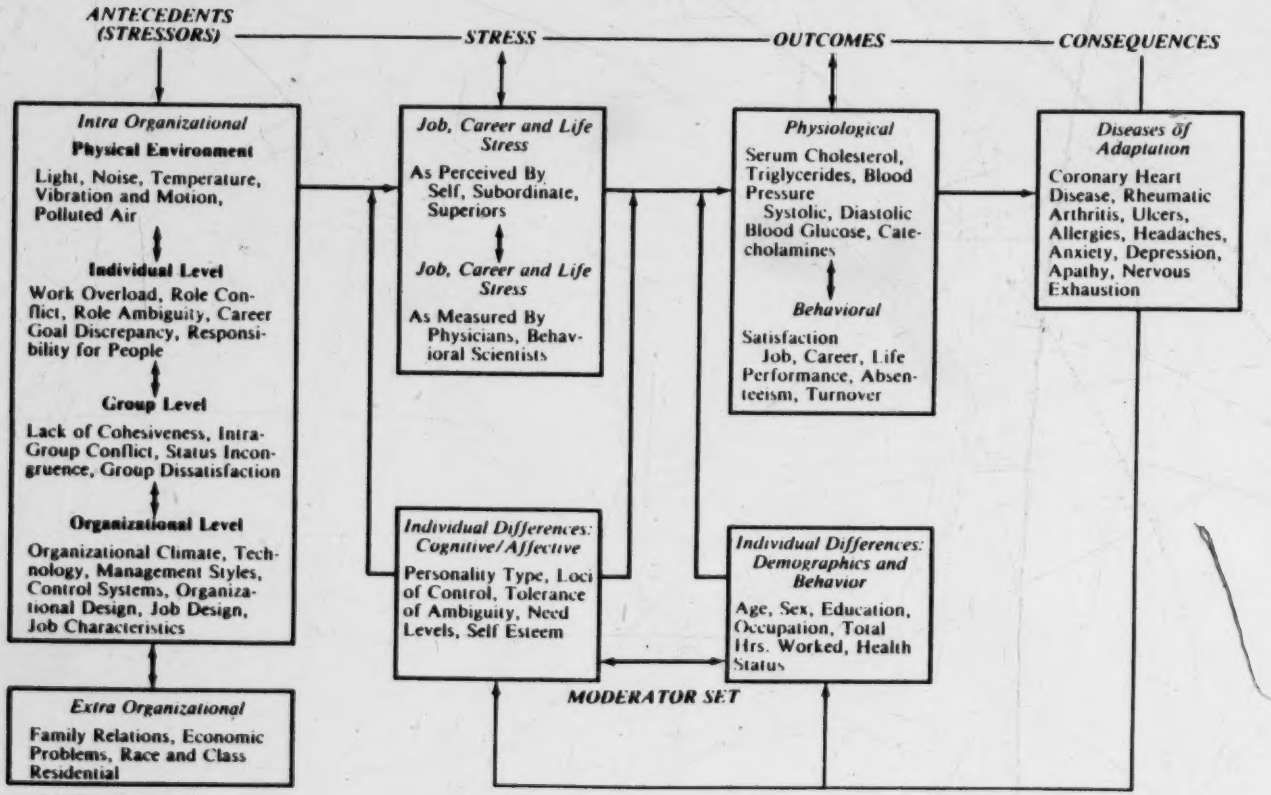
A.

A MODEL FOR ORGANIZATIONAL STRESS RESEARCH

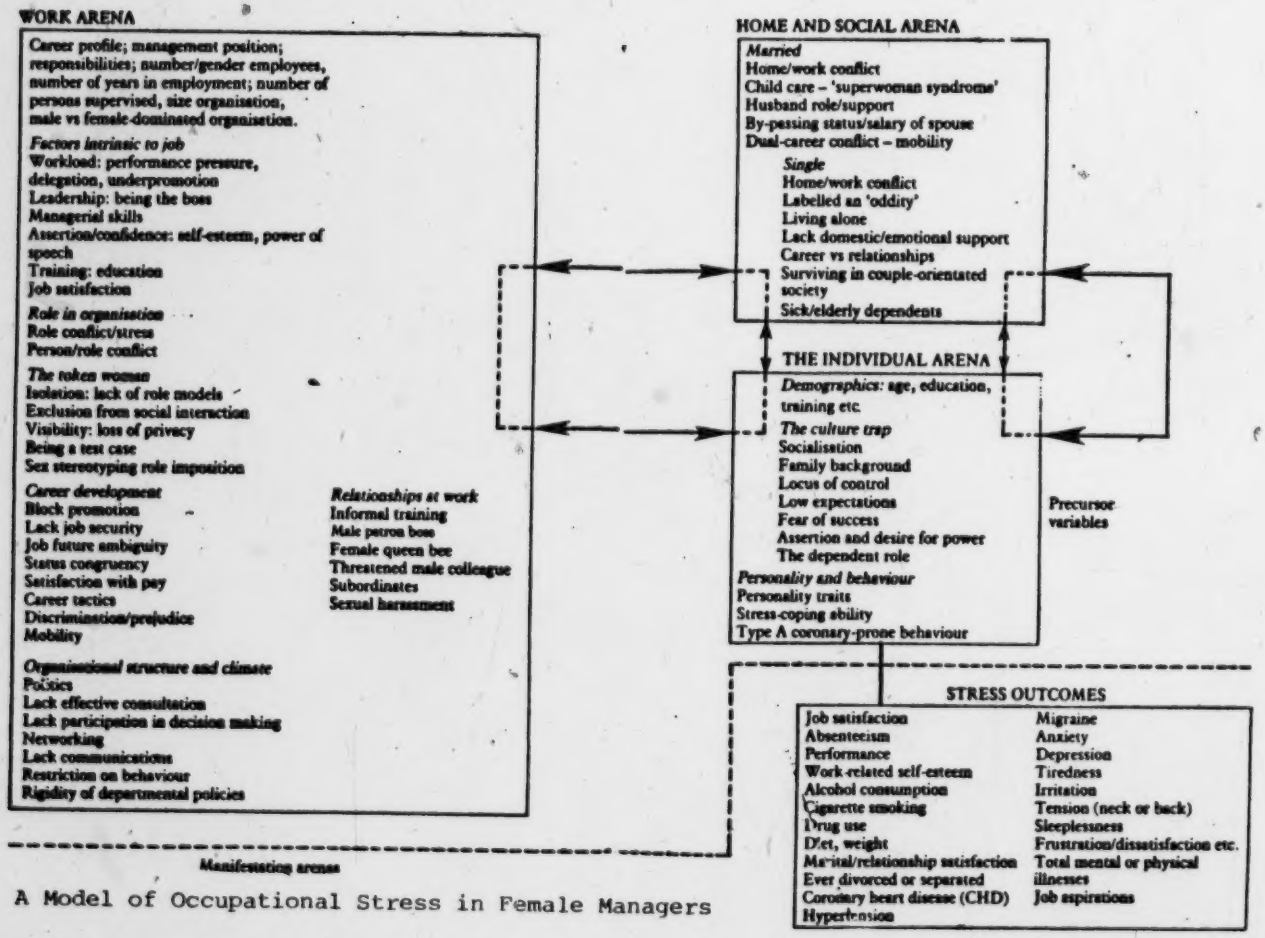
A Model for Organizational Stress Research


ANTECEDENTS (STRESSORS)
STRESS
OUTCOMES
CONSEQUENCES
Intra Organizational
Physical Environment
Light, Noise, Temperature, Vibration and Motion, Polluted Air
Individual Level
Work Overload, Role Conflict, Role Ambiguity, Career Goal Discrepancy, Responsibility for People
Group Level
Lack of Cohesiveness, Intra-Group Conflict, Status Incongruence, Group Dissatisfaction
Organizational Level
Organizational Climate, Technology, Management Styles, Control Systems, Organizational Design, Job Design, Job Characteristics
Extra Organizational
Family Relations, Economic Problems, Race and Class Residential
Job, Career and Life Stress
As Perceived By Self, Subordinate, Superiors
Job, Career and Life Stress
As Measured By Physicians, Behavioral Scientists
Individual Differences: Cognitive/Affective
Personality Type, Loci of Control, Tolerance of Ambiguity, Need Levels, Self Esteem
MODERATOR SET
Physiological
Serum Cholesterol, Triglycerides, Blood Pressure Systolic, Diastolic Blood Glucose, Catecholamines
Behavioral
Satisfaction Job, Career, Life Performance, Absenteeism, Turnover
Individual Differences: Demographics and Behavior
Age, Sex, Education, Occupation, Total Hrs. Worked, Health Status
Diseases of Adaptation
Coronary Heart Disease, Rheumatic Arthritis, Ulcers, Allergies, Headaches, Anxiety, Depression, Apathy, Nervous Exhaustion

Note: From Stress and Work by J. M. Ivancevich and M. T. Matteson, Scott, Foresman and Co. 1980.

B.

A MODEL OF OCCUPATIONAL STRESS IN FEMALE MANAGERS



A Model of Occupational Stress in Female Managers

Note: From "Occupational Stress in Female Managers: A Review of the Literature" by M.J. Davidson and C.L. Cooper, 1981b, Journal of Enterprise Management.

C.

Covering Letters to

SURVEY QUESTIONNAIRE

Gerald Long
Department of Educational Psychology
Education Centre - North Wing
The University of Alberta
Edmonton, Alberta
T6G 2G5

May 1, 1985

My name is Gerald Long and I am a Certified Psychologist (Alberta) and a Ph.D. candidate in the Department of Educational Psychology at the University of Alberta. The research in which you are being asked to participate will form the basis for my doctoral dissertation and is being supported by Alberta Workers' Health, Safety and Compensation through a grant under the Occupational Health and Safety Heritage Grant Program.

You are one of several hundred managers employed by the Government of Alberta who is being asked to voluntarily participate in this study. The research is concerned with occupational stress and the physical and mental health of managers, as well as the ways in which they deal with occupational pressures and problems. Although there is some emphasis on female managers, the questions being asked are also very significant for male managers. It is hoped that the research will make both theoretical and practical contributions to our knowledge and understanding in these areas, and to developing approaches that could beneficially assist managers in dealing with occupational pressures and improving health and well-being.

Although I would very much appreciate your co-operation, I want you to be aware that participation in this research is on a purely voluntary basis. You may choose not to participate or refuse to answer any question(s) in completing the questionnaire. Alternatively, should you be willing to participate, your completion and return of the Survey Questionnaire will be assumed to be your consent to do so.

All data required will be gathered through the attached Survey Questionnaire. Although completion times will vary, this is expected to require between 60 and 90 minutes. I fully realize that this is a significant request to impose upon your already busy schedule, but do hope that you will be able to find some way to fit it in. I would request that you return the Questionnaire as early as possible, or by June 1, 1985

.../2

Your answers will remain anonymous and strictly confidential. Although you will be requested to provide certain personal and job demographic information, you will not be asked to identify yourself. To ensure confidentiality of your responses, the Survey Questionnaire is being provided to you in a stamped and addressed envelope in order that completed questionnaires can be returned directly to me. Finally, I will be the only person with access to the completed questionnaires and the results will only be reported on a group basis.

For those interested in the results of the study, I expect they will be available by September. I will be making a summary report of the overall results available to Personnel Directors/Managers at that time, as well as making myself available for contact by interested participants.

If you have any questions or require clarification at this time, please do not hesitate to contact me by calling 438-0768 or leaving a message at 432-3746.

I sincerely appreciate and thank you for your co-operation.

Gerald Long

HGL:ada
Enclosure

Gerald Long
Department of Educational Psychology
Education Centre - North Wing
The University of Alberta
Edmonton, Alberta
T6G 2G5

My name is Gerald Long and I am a Certified Psychologist (Alberta) and a Ph.D. candidate in the Department of Educational Psychology at the University of Alberta. The research in which you are being asked to participate will form the basis for my doctoral dissertation and is being supported by Alberta Workers' Health, Safety and Compensation through a grant under the Occupational Health and Safety Heritage Grant Program.

You are one of several hundred managers employed by organizations in the private and public sectors in Alberta who is being asked to voluntarily participate in this study. The research is concerned with occupational stress and the physical and mental health of managers, as well as the ways in which they deal with occupational pressures and problems. Although there is some emphasis on female managers, the questions being asked are also very significant for male managers. It is hoped that the research will make both theoretical and practical contributions to our knowledge and understanding in these areas, and to developing approaches that could beneficially assist managers in dealing with occupational pressures and improving health and well-being.

Although I would very much appreciate your co-operation, I want you to be aware that participation in this research is on a purely voluntary basis. You may choose not to participate or refuse to answer any question(s) in completing the questionnaire. Alternatively, should you be willing to participate, your completion and return of the Survey Questionnaire will be assumed to be your consent to do so.

All data required will be gathered through the attached Survey Questionnaire. Although completion times will vary, this is expected to require between 60 and 90 minutes. I fully realize that this is a significant request to impose upon your already busy schedule, but do hope that you will be able to find some way to fit it in. I would request that you return the Questionnaire as early as possible, or within the next month.

Your answers will remain <u>anonymous</u> and <u>strictly confidential</u>. Although you will be requested to provide certain personal and job demographic information, you will not be asked to identify yourself. To ensure confidentiality of your responses, the Survey Questionnaire is being provided to you in a stamped and addressed envelope in order that completed questionnaires can be returned directly to me. Finally, I will be the only person with access to the completed questionnaires and the results will only be reported on a group basis.

.../2

For those interested in the results of the study, I expect they will be available by September. I will be making a summary report of the overall results available to each organization at that time, as well as making myself available for contact by interested participants.

If you have any questions or require clarification at this time, please do not hesitate to contact me by calling 438-0768 or leaving a message at 432-3746.

I sincerely appreciate and thank you for your co-operation.

Gerald Long

HGL:ada
Enclosure

The Survey Questionnaire has been removed because of the unavailability of copyright permission. The Survey Questionnaire contained the following:

1. Measures of personal and job demographics of job, home, and social pressures; of psychosomatic health; of work performance and measures used to relax adapted from Stress and the Woman Manager, by M. Davidson and C. Cooper, Oxford: Martin Robinson and Co. Ltd., copyright M. Davidson and C. Cooper, 1983.

2. Profile of Mood States by D. McNair, M. Lorr, and L.F. Droppelman, San Diego: Educational and Industrial Testing Service, Copyright Educational and Industrial Testing Service, 1971.

3. Jenkins Activity Survey by D. Jenkins, S.J. Zyzanski and R. Rosenman, New York: The Psychological Corporation, Copyright The Psychological Corporation, 1979.

4. A measure of adaptive and maladaptive managerial coping strategies adapted from Parasuraman, S. & Cleek, M.A. (1984). Coping behaviors and managers affective reactions to role stressors. Journal of Vocational Behavior, 24; 179-193.

D.

JOB, ORGANIZATIONAL, HOME AND SOCIAL

PRESSURE SUBCATEGORIES

NOTE: Adapted from Stress and the Woman Manager, (pp. 82-84) by M. Davidson and C. Cooper, 1983, Oxford: Martin Robinson and Co. Ltd. Copyright M. Davidson and C. Cooper, 1983.

APPENDIX D

FACTORS INTRINSIC TO THE JOB

Work overlaod

Work underload

Time pressures and deadlines

Taking my work home

Long working hours

Managing/supervising people

Disciplining subordinates

Firing someone

Inability to delegate

Keeping up with new technology/equipment

Staff shortages and staff turnover rates

Attending meeting

Shift work

Equipment failures

Administration and paperwork

Having to stand on my feet all day

The amount of travel required by my work

Lack of variety at work

Inadequate supervision

Playing the counsellor role at work

Being "the boss"

Business travel and stying in hotels alone

New challenges and risks

Too much responsibility

Feeling undervalued

ROLES

Clarity of my job role/job duties

Conflicting job demands, loyalties, etc.

TOKEN WOMAN FACTORS

Being visible

Feel isolated

Lack of sex role models - person of the same sex in a position above me, acting as an example

Members of the opposite sex at work try and force me into behaviours they associate with my sex, rather than letting me "be myself"

Feeling I have to perform better at my job than colleagues of the opposite sex

CAREER DEVELOPMENT

Overpromotion - promoted beyond my competence

Underpromotion - employed beneath my competence

I feel my sex is a disadvantage when it comes to job promotion/career progress prospects

Sex discrimination and prejudice

Inadequate job and training experience compared to colleagues of the opposite sex

Colleagues of the opposite sex being treated more favourably by management

Unclear career - progress prospects

Rate of pay

RELATIONSHIPS AT WORK

Lack of support form superiors

Lack of social support from people at work

Lack of encouragement from superiors

Sexual harassment of a verbal or physical nature

Working relationships with male superiors

Working relationships with male colleagues/peers

Working relationships with male subordinates

Working relationships with female superiors

Working relationships with female colleagues/peers

Working relationships with female subordinates

Members of the opposite sex seem uncomfortable working with me because of my sex

I feel uncomfortable working with members of the opposite sex.

Experiencing prejudiced attitudes from members of the opposite sex at work because of my sex

Experiencing prejudiced attitudes from members of the same sex at work because of my sex

I feel uncomfortable on training courses when a member of the minority sex

ORGANIZATIONAL STRUCTURE AND CLIMATE

Lack of control in my work environment

Office politics

Lack of power and influence

My beliefs conflicting with those of the company/organization

Lack of consultation and communication

Inadequate feedback on my work

Poor work environment

Inadequate resources and finances

Redundancy threat

HOME AND SOCIAL FACTORS

Having to move with my job in order to progress in my career

Not being able to move with my job in order to progress in my career

My spouse/partner's attitude towards my career

Demands of work on my relationship with my children

Demands of work on my relationship with spouse/partner

Earning more than my spouse/partner

My career-related dilemma concerning whether to marry/live with someone

My career-related dilemma concerning whether to start a family

Being single, other people sometimes label me as a bit of an "oddity"

Being single, I am sometimes excluded from social and business events such as dinner parties

Lack of emotional support at home

Lack of domestic support at home

Demands of work on my private/social life

Conflicting responsibilities associated with running a home and career

E.

PRESSURE, HEALTH, WORK PERFORMANCE AND MEASURES USED TO RELAX ITEMS REACHING $P<.05$ and $P<.01$ LEVELS OF SIGNIFICANCE

E.1

Sources of Work Pressure: Significant Differences Between the F and M Samples

Source of Pressures	df	Mean F	Mean M	Mean Squares	F	P
Factors Intrinsic to the Job	1	1.98	2.28			
Keeping up with new equipment/technology				5.805	6.535	.011
Attending meetings	1	1.85	2.13	4.661	5.428	.021
Long working hours	1	2.09	1.02	4.843	4.846	.029
Administration & paperwork	1	2.14	2.40	4.799	4.946	.027
Business travel and staying in hotels alone	1	1.58	1.35	2.329	3.997	.047
Home and Social Factors						
Lack of emotional support at home	1	1.77	1.45	3.953	4.252	.041
My career-related dilemma whether to marry/live with someone	1	1.49	1.18	3.634	5.768	.017
Being single I am sometimes excluded from social/bussiness events	1	1.41	1.16	3.170	6.095	.014

E.2

Source of Work Pressure: Significant Differences Between Management Levels

Sources of Pressure/ Manager/Levels	DF	Mean	Mean Square	F	P
Factors Intrinsic to the Job					
New challenges and risks					
Senior	2	1.84	2.611	3.398	.035
Middle		1.74			
Junior		2.04			
Career Development					
Rate of pay					
Senior	2	2.11	4.729	3.398	.035
Middle		2.59			
Junior		2.68			
Relationships at Work					
Work relationships with male colleagues/peers					
Senior	2	1.47	2.638	4.050	.019
Middle		1.50			
Junior		1.81			
Members of opposite sex seem uncomfortable working with me because of my sex					
Senior	2	1.29	1.579	3.132	.045
Middle		1.35			
Junior		1.60			

E.3

General Health, Work Performance and Measures Used to Relax: Significant Difference Between F and M Samples

	DF	Mean F	Mean M	Mean Square	F	P
General Health						
Are there times when you get tired very easily?	1	2.85	2.63	2.798	4.314	.039
Do you find it difficult to get up in the morning?	1	2.69	2.41	4.081	3.965	.048
Do you ever feel mentally exhausted and have difficulty in concentrating or thinking clearly?	1	2.49	2.29	2.278	4.163	.042
Work Performance						
Unable to sell myself in competitive situations	1	2.38	2.18	2.591	4.045	.045
Measures Used to Relax						
Take aspirin	1	1.62	1.43	2.903	4.274	.040
Talk to someone you know	1	3.48	3.18	4.995	6.625	.011

E.4

Work Performance: Significant Differences
Between Management Levels

	DF	Mean	Mean Square	F	P
Unable to do my best					
Senior	2	2.32	2.199	4.060	.018
Middle		1.94			
Junior		2.07			
Unable to cope well with conflic situations					
Senior	2	2.13	1.944	3.475	.032
Middle		2.30			
Junior		2.50			

E.5

Sources of Work Pressure, General Health and Moods:
Interactions Sex x Management Level

Source/Management Level	DF	Mean (sex) (F)	Mean (sex) (M)	Mean Square	F	P
Work Pressure						
Redundancy threat						
Senior	2	1.77	1.96	5.63	5.070	.007
Middle		1.50	1.95			
Junior		2.03	1.60			
General Health						
Do you ever have trouble getting to or staying asleep?						
Senior	2	2.46	2.83	2.657	3.428	.034
Middle		2.72	2.57			
Junior		2.53	2.98			
Times when you just don't feel like eating?						
Senior	2	1.46	1.76	2.138	3.156	.044
Middle		1.94	1.97			
Junior		2.18	1.77			
Moods						
POMS Confusion/Bewildermet Score						
Senior	2	37.50	38.00	146.168	3.259	.040
Middle		37.66	39.25			
Junior		40.48	37.47			

F.

PUBLIC AND PRIVATE SECTOR COMPARISONS

APPENDIX F

Although not the primary focus of the research, the sampling from both the public and private sectors provided the opportunity for comparisons of managers in these sectors. A 2 x 2 (sex x sector) ANOVA was employed to test for sex and sector differences in terms of sources of pressure, psychosomatic health, mood states and total mood disturbance, job satisfaction, job performance, adaptive and maladaptive managerial coping, measures used to relax and Type A variables. As with the sex x management level ANOVA, the $p<.001$ level of statistical significance was accepted in relation to the work pressure comparisons and $p<.01$ was accepted for comparisons of all other variables.

On this basis, the only statistically significant difference found related to the use of "leave your work area and go somewhere (time out, sick days, lunch away from organization, etc.)" as a method of relaxing. On this item, managers in the public sector ($M=2.67$) reported a significantly (mean square = 11.747, $F = 11.258$, $p<.001$) more frequent useage than managers in the private sector ($M = 2.56$). Beyond this one minor exception, no statistically significant differences were found, suggesting that the observed sex and management level differences are consistent across the public and private sectors.